

DATE 4 SEPT 64  
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
<del>1-2</del>	0920	BROWN BOOBY	2	NE	25-30'	1-imm, 1ad.	
	1000	---	---	---	---	COMMENCE AT SEA OBSERVATIONS (DATA Collection By SHIP)	
<del>5-10</del>	1000	Noddy Comm.	3	<del>SE</del>	Low		
<del>25-53</del>	1000	WEDGETAIL	1	<del>SE</del>	Low		
	1000	COMM. NODDY	1	SW	low		
<del>F</del>	1030	WEDGETAIL	24	<del>SE</del>	"		
<del>1-1</del>	1030	HAWAIIAN NODDY	1	"	"		
	1030	COMMON NODDY	3	"	"		
	1042	WEDGETAIL	1	SW	"	(Wedgetails have pterodroma like flight today)	
	1044	"	1	<del>SE</del>	"	(How about that?)	
	1102	"	1	NW	"		
	1111	"	1	NW	"		
	1112	"	1	<del>SE</del>	"		
	1114	"	1	"	"		
	1115	"	2	"	"		
	1122	Common Noddy	2	ENE	"		
	1125	Wedgetail Sh	1	NW	Low		
	1130	Wedgetale	1	<del>thataway</del>	Low		
	1140	"	1	NW	Low		
	1141	"	2	NW	"		
	1141	Common Noddy	1	NE	"		
	1145	WEDGETAIL	1	NW	"		
	1146	"	1	SE	"		
	1224	"	1	SW	to 30'	No flapping	
	1234	"	1	SW	low		
	1235	"	2	SW	"		
	1242	"	1	W	low		
	1245	"	1	S	"		
	1250	"	2	NW	"		
	1250	"	2	NW	"		
	1251	"	1	NE	"		
<del>1-1</del>	1254	Wh.T. Tropic	1	SE	to 40'	got up from water	
	1256	Wedgetail	1	NE	low		
	1256	"	1	<del>SE</del>	"		

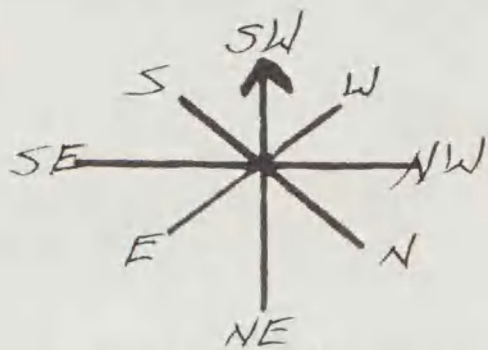




DATE 4 Sept 1969  
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
3-5	1300	Common Noddy	2	N	low		
28-644	1300	Wedgetail	1	N	"		
	1309	Common Noddy	2	N	"		
F	1310	Wedgetail	15	⊙	"		
	1314	"	1	S	to 30'		
	1318	"	1	S	low		
	1322	"	1	N	"		
4-4	1322	Newell's	1	N	"		
	1324	Wedgetail	1	NE	"		
	1331	"	1	N	"		
	1332	"	1	N	"		
	1337	"	1	N	"		
	1339	"	1	N	"		
1-1	1344	R.F. Booby	1	N	"		
	1349	Wedgetail	2	N	"		
	1353	"	1	N	"	wedgetails still flying like Pterodromas	
	1403	"	1	S	to 40'		
	1408	Newell's	1	N	low		
F	1410	Wedgetail	600±100			Densest flock live ever seen - birds literally obscured the water in feeding concentration. Entire mass would rise slightly, then settle on water all together briefly. KA	
	1420	Newell's Sh	1	NW	20'		
	1423	Wedgetail Sh.	1	N	Low		
	1431	"	1	NW	Low		
	1432	Wedgetail	2	ENE	Low		
	1440	Com. Noddy	1	NNW	Low		
	1443	Wedgetail	1	NNE	Low		
	1450	"	1	N	Low		
	1452	Wedgetail	1	NE	Low		
	1503	Wedgetail	2	NE	Low		
1-1	1510	White Tail Tropic	1	SE	80'		
	1514	Wedge Tail Sh.	1	N	Low		
	1523	"	1	NE	Low		
1-1	1534	Sooty Tern	1	S	1-2'		
	1535	Wedge Tail Sh.	1	N/E	Low		
	1536	Wedgetail	1	NE	Low		
	1548	Newell's Sh	1	N	Low		
	1607	WEDGETAIL	1	NW	Low		
	1610	"	1	SE	"		
	1613	"	1	NE	"		





DATE 4 SEPT 64  
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
<del>1-1</del>	1630	COMMON NODDY	1	SE	Low		
<del>1-1</del>	1631	WHITE-TH. TROPIC	1	E	<del>80'</del>		
<del>15-17</del>	1635	WEDGETAIL	1	NW	"		
<del>2-2</del>	1642	Red-TH. TROPIC	1	E	150'		
	1651	WEDGETAIL	1	E	Low		
<del>11-12</del>	1653	NEWELL'S	1	NW	Low		
	1654	WEDGETAIL	2	<del>SW</del>	Low		
	1654	NEWELL'S	1	NW	Low		
	1657	WEDGETAIL	2	<del>SW</del>	Low		
	1709	Newells	1	N	"		
	1709	Wedgetail	1	N	"		
	1714	NEWELLS	1	N	"		
	1720	Wedgetail	1	NW	"		
	1727	NEWELLS	1	NE	"		
	1728	Wedgetail	1	NW	"		
	1734	"	1	NW	"		
<del>2-2</del>	1734	Shear-Pet	1	NE	"		
<del>1-1</del>	1734	Bird	1	NE	"		
	1735	Newell's	1	N	"		
	1741	"	1	NE	"		
	1744	"	1	NW	"		
	1746	"	2	NW	"		
	1747	Wedgetail	1	NW	"		
	1749	Newell's	1	N	"		
	1752	Wedgetail	1	N	"		
	1759	Newell's	1	SE	"		
	1811	Wedgetail	1	N	"		
	1814	"	1	SE	"		
	1817	Shear-Pet	1	NW	"		
	1821	Wedgetail	1	NE	"		
	1841	"	1	NE	"		
	1843	"	1	NE	"		
	1852	<del>White-TH.</del> R-T. Tropic	1	LN	60	1mm	
	1853					end observations	
	1855	Red-T. Tropic	1	S	70'		





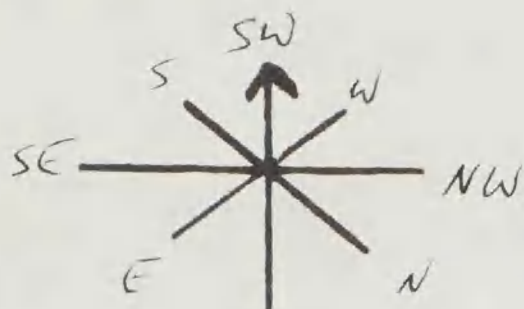
DATE 5 SEPT 64  
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
<del>SUNRISE</del>	0530X					Begin observations	
<del>7-10</del>	0544	Sooty(?) Shear	1	S	to 20'	Appeared all dark, Newells shape but larger, slower, less regular flapping	
<del>16-35</del>	0551	Wedgetail	1	NE	low		
	0558	Wedgetail	1	NE	"		
<del>3-3</del>	0600	Bulwers	1	SE	"		
<del>6-7</del>	0600	Shear-Pet	1	SE	"		
	0600	Shear-Pet	1	SE	"		
<del>1-1</del>	0600	Newells(?)	1	NW	"		
<del>2-4</del>	0615	Sooty Tern	2	NNW	"		
	0621	Wedgetail	1	NE	"		
	0630	Shear-Pet	1	SW	"	Wedgetail or Bulwers - distant	
<del>2-2</del>	0632	Frigate	1	⊙	75'		
	0638	Wedgetail	1	NE	low		
	0644	Wedgetail	1	NW	"		
	0649	Sooty Shear	1	SE	to 40'		
	0651	Wedgetail	1	SW	low		
	0657	Wedgetail	1	NNW	"		
	0700	Shear-Pet	1	SE	"	distant	
<del>2-1F</del>	0705	R.F. Booby	1				
		Sooty Tern	2?	} NW	low	Not feeding - (H.W.) F-1-8	
		Wedgetail	5±1				
	0714	Bulwers	1	NE	low		
	0733	Sooty Shear	1	SE	to 30'		
	0733	Sooty Shear	1	SE	to 20'		
	0735	Sooty Shear	2	SE	to 20'		
	0744	" "	3	SE	to 30'		
	0744	Wedgetail	1	SE	low		
	0750	"	1	SW	"		
	0750	Bulwers	1	NW	"		
	0753	Shear Pet	2	NW	"		
	0756	Wedgetail	3	NW	"		
	0757	R.F. Booby	1	NW	"	Sub adult	
	0757	Sooty Shear	1	SE	to 40'		
	0800	Wedgetail	11±1	NW	low	got up from water	
	0809	"	3	SW	"		
	0810	"	1	NW	"		
	0813	"	2			joined above 3 following ship	
	0821	Shear Pet	1	NW	low		
	0822	Frigate	1	SE	100'		
<del>1-1</del>	0824	R-T Tropic	1	E	50'		
	0828	wedgetail	1	SE	low		

15  
38  
77

9/6

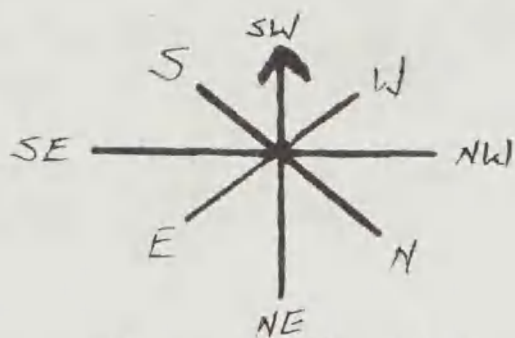




DATE 5 Sept 64  
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
<del>21-23</del>	0830	Sooty Shear	1	SE	0-15'	} spread over 2 1/4 mi.	
	0831	"	1	SE	"		
	0832	"	2	SE	"		
	0834	"	1	SE	0-10'		
<del>2-2</del>	0834	R.T. Tropic	1	W?	50'	circling ship - dove nearly straight into water, stayed on surface 5 sec., took off E.	
	0843	Sooty Shear	1	SE	0-15'		
<del>2-2</del>	0845	Shear Pet	1	SSE	0-15'	Probably sooty shear	
	0851	Sooty Shear	1	SSE	0-10'		
	0858	"	2	SSE	0-15'		
	0859	"	1	SSE	0-15'		
	0900	Shear Pet	1	SSE	Low	probably wedgetail	
	0906	Sooty Shear	1	SE	0-8'		
<del>7-9</del>	0908	Wedgetail	1	NNW	Low		
	0914	"	1	NE	"		
	0917	Sooty Shear	1	SSE	"		
	0926	"	1	SSE	0-19'		
<del>1-1</del>	0927	Frigate	1	E	90'		
	0945	Sooty Shear(?)	1	SSE	Low		
	0949	Sooty Shear	1	SSE	0-20'		
	0953	Wedgetail	1	NNW	Low		
	0957	"	1	NNW	Low		
	0958	Sooty Shear	1	SSE	0-10'		
	1000	"	1	"	0-8'		
	1003	WEDGETAIL	1	SW	Low		
	1005	SOOTY SHEAR	1	SE	"		
	1008	"	1	S	"		
	1008	"	1	S	"		
	1012	R.T. - Tropic	1	S	80'		
	1013	WEDGETAIL	1	N	Low		
	1014	SOOTY SHEAR	1	S	3-20'		
	1020	WEDGETAIL	1	<del>SW</del>	Low		
	1021	"	1	"	"		
	1024	SOOTY SHEAR	1	S	"	DARK PHASE	
	1030	"	1	S	"		
<del>1-1</del>	1035	NEWELL'S	1	CA	"	- Collected	
<del>1-1</del>	1050	BULWERS Pet	1	NE	"		
	1051	WEDGETAIL	1	NE	"		



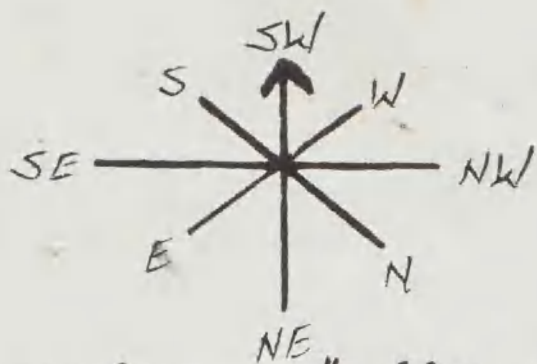


DATE 5 SEPT 64  
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
<del>2-2</del>	1055	SHEAR-PET	1	NE	LOW	DISTANT	
<del>4-47</del>	1111	WEDGETAIL	1	NE	"		
	1111	"	1	NE	"		
<del>7-9</del>	1120	SOOTY SHEAR.	1	SE	"		
	1121	WEDGETAIL	1	NE	"		
<del>2-13</del>	1135	SOOTY TERN	3	E			
<del>3-3</del>	1135	NEWELL'S	1	SE	LOW		
	1150	SOOTY(?) SHEAR	2	SE	LOW		
<del>5-5</del>	1150	Bulwer's Pet	1	N	LOW		
	1157	WEDGETAIL	1	SE	LOW		
<del>2-8</del>	1200	FRIGATE	2			NOT SEEN TO FEED	
		Bulwers	1				
<del>1-1</del>		FAIRY TERN	1				
<del>1-1</del>		<del>WEDGETAIL</del>					
<del>1-1</del>		RED-ft. BOOBY	1			S. Adult	
		HODDY, Com.	11				
	1210	Shear-Pet	1	SE	LOW		
	1222	Wedgetail	1	SE	LOW		
	1227	Wedgetail	1	NE	LOW		
	1235	Sooty Shear	1	SE	LOW		
F	1300	Sooty Tern	10		LOW	No fish seen - not seen to feed.	
		Wedgetail	26				
		Bulwers	1				
	1309	Bulwer's	1			on water	
	1322	Wedgetail Sh	2	SE	LOW		
	1326	Sooty Sh.	2	SE	LOW		
	1327	Newell's Sh	1	SW	LOW	- appears to be molting primaries.	
F	1340	Wedgetail	8		LOW	- 2 collected not feeding	
	1351	Frigate	1	NNE	100'		
	1402	Sooty Shear	1	SSE	0-10		
	1414	Bulwers	1	SE	LOW		
	1430	NEWELL'S	1	SE	LOW		
	1435	WEDGETAIL	1	SE	LOW		
	1451	SOOTY SHEAR	1	SE	LOW		
	1454	WEDGETAIL	1	E	LOW		
	1500	"	1	NW	"		
	1514	"	1		"		
	1515	"	1		"		
	1519	SOOTY SHEAR	1	S	"		
<del>1-1</del>	1530	MASKED BOOBY	1	SE	"	Imm.	

F-2-45





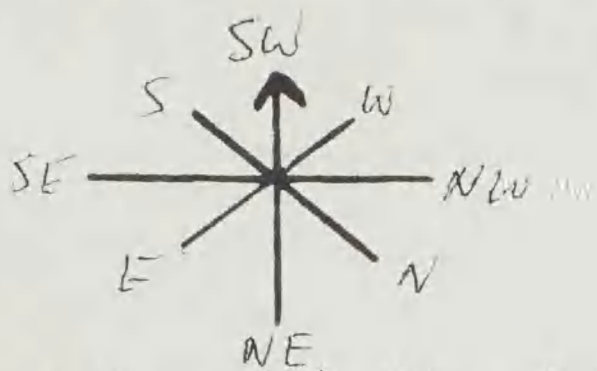
DATE 5 SEPT 64  
Pg. # 4

Rise 0529 Sun set 1803

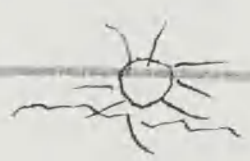
	time	species	#	dir.	hgt.	remarks	loc.
<del>4-21</del>	1534	WEDGETAIL	2	<del>SE</del>	Low		
	1551	"	2	"	"		
	1555	"	1	NW	"		
	1557	"	1	—	—	Collected	
	1603	"	1	W	Low		
<del>3-3</del>	1613	Shearwater-Petrel	1	SE	highly Low		
	1622	Wedgetail Sh.	2	NW	Low		
<del>5-5</del>	1627	Bulwer's Petrel	1	SE	Low		
<del>1-1</del>	1630	Bonin Is.	1	E	Low		
<del>4-6</del>	1634	Sooty? Shearwater	1	FNE	Low S		
	1638	Shearwater-Petrel	1	SW	Low		
	1654	" "	1	SE	Low		
	1655	Bulwer's Petrel	1	SE	Low	sitting on water	
	1700	WEDGETAIL	1	SE	Low		
<del>F</del>	1707	"	14	SE	"	Not feeding - Flying fish nearby - Two Wedgetails Arose from water.	
<del>1-6</del>	<del>1710</del>	SOOTY TERN	6	SE	Low		
	<del>1710</del>	Bulwers	1	"	"		
<del>1-2</del>		FRIGATES	2	"	"		
<del>1-1</del>		FAIRY TERN	1	"	"		
	1713	WEDGETAIL	1	E	Low		
	1713	Bulwers	1	NE	"		
	1715	SOOTY SHEAR	3	SSE	To 30'		
	1724	Bulwers	1	SE	Low		
	1728	SOOTY SHEAR	1	SE	"		
	1733	Wedgetail Sh.	1	SE	Low		
	1745	<del>Sooty Shearwater</del>	1	SE	Low		
	1752	Wedge tailed	1	SE	"		
	1803	— SUNSET APPARENT. —					

F-1-24



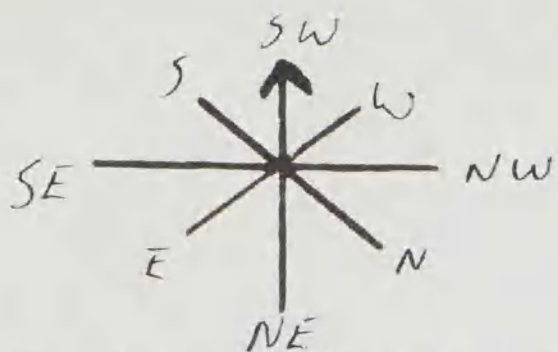


DATE 6 SEPT 64  
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0536	Wedgetail	1	E	low		
	0546					<i>sunrise</i> 	
<del>8-8</del>	0553	Bulwers	1	ENE	low		
<del>4-5</del>	0554	Shear-Pet	1	ENE	"		
	0612	Bulwers	1	SW	"		
	0619	Shear-Pet	1	E	"		
<del>1-1</del>	0633	Newell's SR	1	N	low		
	0645	Shear Pet	1	SE	low		
<del>3-3</del>	0700	Wa-neck Pet	1	NE	To 25'		
<del>8-19</del>	0704	Wedgetail	1	SE	low		
	0705	Wa-neck Pet	1	ENE	low		
	0725	Wedgetail	1	NE	"		
<del>2-2</del>	0736	Golden Plover	1	SW	40'	calling	
	0746	Golden Plover	1	SW	50'	calling	
	0751	Bulwers	1	S	low		
	0836	BULWERS	1	WSW	low		
<del>5-36</del>	0846	SOOTY TERN	1	ENE	30'		
	0848	" "	3	SE	30'		
<del>1-1</del>	0848	SHOREBIRD	1	—	—	SEEN VERY DISTANT. UNIDENTIFIABLE	
	0851	BULWERS	1	SE	low		
	0906	WEDGETAIL	1	NE	"		
	0911	"	1	E	"		
	0914	SOOTY TERN	3	SE	"		
	0915	—	—	—	—	BARGE + TOW ON STARBOARD HORIZON @ 10'clock	
	0930	WEDGETAIL	1	E	low		
	0934	Bulwers	1	SE	low		
	0934	Shear-pet	2	SE	low		
F	0950	SOOTY TERN	28			FEEDING ON SMALL Flying Fish.	
		WEDGETAIL	12 ± 2				
		WHITE-N. PETREL	1				
<del>1-1</del>		POMERINE JAGER	1			LIGHT PHASE	
<del>1-1</del>	1020	Tropicbird	1	NW	30'	distant	
	1100	Bulwers	1	NE	low		
	1105	Bulwers	1	NW	"		
	1116	Wedgetail	1	NE	"		
	1221	"	1	"	"		
	1231	SOOTY TERN	1	SE	—		
<del>1-1</del>	1234	R.-F. Booby	1	SW	low	Ad.	

F-1-42  
FF-1-42



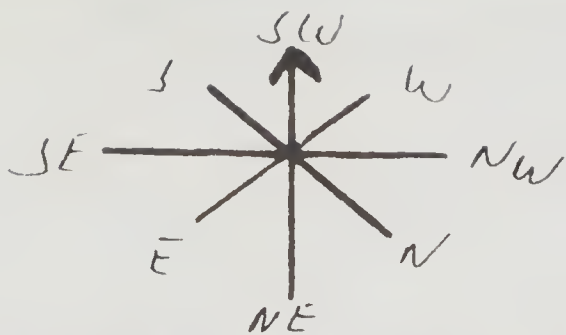


DATE 6 Aug 1964  
Pg. # 2


	time	species	#	dir.	hgt.	remarks	loc.
<del>12-32</del>	1247	Wedgetail	1	NE	Low		
<del>12-1</del>	1249	R-T Tropic	1	Ø	OH <sub>2</sub> O	collected P Woodward	
<del>12-1</del>	1305	R-F Booby	1	W	low		
	1356	Wedgetail	4	NE	low		
<del>10-84</del>	1356	Sooty Tern	1	NE	40'	Remnants of Flocks perhaps or start of one traveling together.	
<del>4-8</del>	1415	Bulwer's	3	S	low		
	1428	Bulwer's	1	SW	low		
<del>2-2</del>	1458	Bonin(?)	1	SE	low		
	1515	Sooty Tern	3	SE	40'		
	1519	Bulwer's	1	SW	low		
	1608	Wedgetail	1	S	low		
	1615	Wedgetail	1	ESE	low		
	1617	Wedgetail	1	ENE	low		
F	1622	Bulwer's	3	Ø	low	Not Feeding.	
<del>12-1</del>		Pterodroma	1		low		
	1623	Wedgetail	2	NE	low		
	1623	Wedgetail	1	NE	low		
	1630	Wedgetail	1	NE	low		
	1633	(BoninIs) Petrel	1	SW	low		
	1634	Sooty Tern	4	NW	50'		
F	1645	Sooty Tern	30-35		low	Feeding. Fish jumping out of water.	
		Wedgetail	8	Ø	low		
<del>2-2</del>		Gr Frigate	1		100'		
F	1646	Sooty Tern	13	E	50'	Going To above Flock.	
F	1646	Sooty Tern	10		low		
		Gr Frigate	1	Ø	75'		
<del>12-1</del>	1647	Kermadec Pet	1	E	low	Dark phase, PWW	
F	1648	Sooty Tern	11	E	50'		
<del>12-1</del>	1655	Sooty Shear	1	SSW	low	flying Towards 1645 flock	
F	1656	Sooty Tern	8	ENE	low	flying Towards 1645 flock.	
	1701	Wedgetail	1	ENE	low		
	1710	Sooty Tern	2	E	low		
	1710	Sooty Tern	2	E	low		
	1710	Wedgetail	2	E	low		
	1710	Wedgetail	2	E	low		
	1723	Wedgetail	1	NE	low		
	1731	Wedgetail	1	E	low		
	1749	Wedgetail	1	NE	low		
	1751	Wedgetail	2	SE	low		
	1752	Wedgetail	2	NE	low		

F-6-86  
FF-1-39

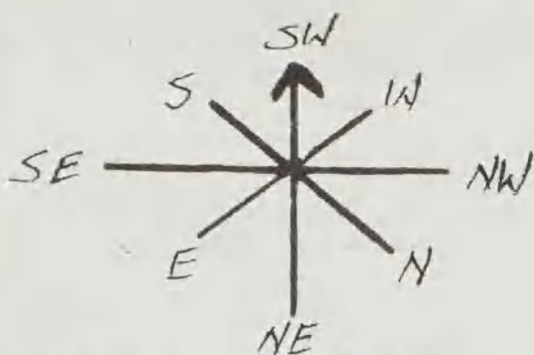




DATE 6 Sept 1964  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
<del>2-2</del>	1800	Sooty Shear	1	SE	low	
<del>1-1</del>	1802	Bulwer's Petrel	1	ENE	low	
<del>3-3</del>	1806	Wedgetail	1	NE	low	
	1818	Wedgetail	1	ENE	low	
	1822	Wedgetail	1	NE	low	
	1822	Sooty Shear	1	SE	low	
					not arching high. flying straight. alternate flapping gliding.	
	1823				Sun appears to be down	
						





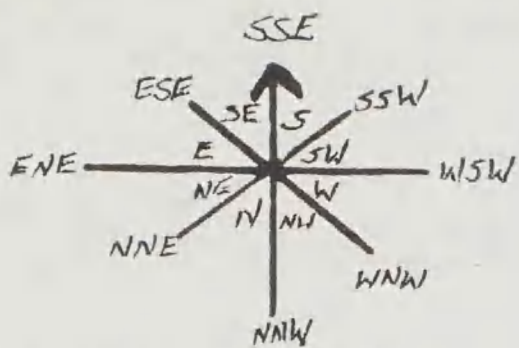
DATE 7 SEPT 64  
Pg. # 1

OUT OF GRID

	time	species	#	dir.	hgt.	remarks	loc.
	0600	WEDGETAIL	4	NW	LOW		
	0601	SOOTY TERN	2	NW	50'		
	0604	WEDGETAIL	3	NE	LOW		
	0604	---	---	---	---	SUNRISE	
17-19	0606	WEDGETAIL	1	<del>SW</del>	LOW		
	0608	"	1	NE	"	20 MI FROM JOHNSTON ISLAND - IN SIGHT	
4-15	0612	SOOTY TERN	3	N	"		
	0613	WEDGETAIL	1	NE	LOW		
7-10	0615	FRIGATE	1	"	100'		
	0616	WEDGETAIL	1	"	LOW		
	0617	"	1	N	"		
	0617	SOOTY TERN	1	N	"		
	0621	WEDGETAIL	1	S	"		
	0622	---	---	---	---	STOPPED FOR OCEANOGRAPHIC SAMPLING.	
	0625	WEDGETAIL	1	E	"		
	0627	"	2	E	"		
	0632	"	1	<del>SW</del>	"		
	0634	"	1	"	"		
	0635	"	1	E	"		
	0635	"	1	E	"		
	0635	SOOTY TERN	3	S	"		
	0635	"	1	S	"		
	0636	FRIGATE	1	<del>SW</del>	200'		
1-1	0638	BROWN BOOBY	1	S	25'	Imm.	
	0643	WEDGETAIL	1	SE	LOW		
	0646	SOOTY TERN	1	N	20'		
	0651	WEDGETAIL	1	S	LOW		
	0653	"	2	S	"		
	0655	"	1	S	"		
	0658	FRIGATE	1	SE	150'		
	0703	---	---	---	---	UNDERWAY - COURSE SW.	
	0712	---	---	---	---	LORAN GUY WIRES FAINTLY VISIBLE. NO BIRDS ABLE TO BE SEEN IN AIR.	
	0716	SOOTY TERN	3	S	LOW		
	0722	FRIGATE	1	<del>SW</del>	100'		
	0727	"	1	"	"		
	0730	"	1	NE	40'		
	0734	SOOTY TERN	1	N	20'		
	0739	FRIGATE	4	NE	10-150'	OVER SAND IS. - BIRDS VISIBLE ON LORAN GUY WIRES,	
	0746	SOOTY TERN	1	"	30'		
	0750	"	1	N	30'		
	0750	WEDGETAIL	1	<del>SW</del>	LOW		
1-1	0755	COMMON NODDY	1	SE	LOW		
1-1	0755	JAEGER	1	SE	40'	Imm - MUCH BARRING AND SCALLOPING - ESPECIALLY BELOW. RETRICES NOT PLAINLY SEEN	
	0800	---	---	---	---	ENTER GRID - COURSE CHANGE	

TC=56  
UT=26  
ST=17



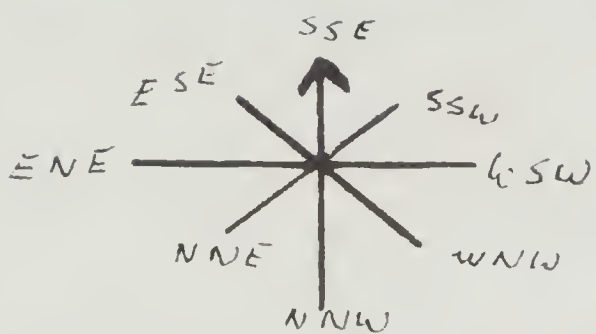


GRID

DATE 7 SEPT. 64  
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
2-12	0808	Sooty Tern	1	NW	30'		TB = 46
	0809	Sooty Tern	3	S	low		WT = 22
12-22	0810	Wedgetail	1	NNW	low		ST = 12
	0820	Wedgetail	1	WNW	low		
	0823	Wedgetail	1	⊙	low		
	0824	Sooty Tern	1	SSW	Low		
	0829	Sooty Tern	1	WNW	Low		
	0830	Wedgetail	1	NW	Low	orange streamer	
	0830	Sooty Tern	3	NNE	Low		
	0900	Wedgetail/Sh	1	NNW	Low	Land has disappeared.	
3-3	0910	Bulwer's Pet	1	NNW	Low		
	0912	Wedgetail	1	N	Low	orange streamer	
	0912	Bulwer's Pet	1	NNW	Low		
TF	0915	Ruddy Turnstone	7	⊙	To 50'	indling ship. <sup>NOT</sup> feeding - of course not.	
	0922	Wedgetail	1	SSE	Low		
	0944	Wedgetail	2	SSE	Low		
	1000	Sooty Tern	1	NNW	40'		
	1009	Wedgetail	1	NNW	low		
	1026	"	1	SSE	"		
	1029	Sooty tern	2	ESE	35'		
	1030	Wedgetail	2	WSW	low		
	1035	---	---	---	---	5' shark sighted cruising NNW following shark?	
	1036	Bulwer's	1	NNW?	low		
	1038	Wedgetail	2	NNW	"		
	1045	"	1	G	"		
+	1046	R-T Tropic	1	S	"	sitting in water	
	1104	---	---	---	---	same tropic bird seen sitting on water	
	1125	---	---	---	---	1/4 mi. to starboard	
						stop to collect large fish-ball - attached. gooseneck barnacles collected; small fish swimming under ball.	
	1152	Wedgetail	1	SE	low		
	1155	"	2	WSW	"	1 dark phase	
+	1156	Fairy tern	1	ENE	10'	shot - 9 DW	
	1205	Wedgetail	2	⊙	low	around fairy tern	
	1209	"	1	⊙	"	joined above pair	





DATE 7 Sept 64  
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
<del>4-33</del>	1230	wedgetail	1	SSE	low	collected - RWM	T0 9
<del>2-3</del>	1233	Shear-Pet	1	SSE	low	distant	WT = 2
	1250	wedgetail	1	NNW	low		ST = 4
	1252					Shark swimming by dead organism of some sort	
<del>2-3</del>	1300	Bird	1	SSE	low	Pterodroma pattern but not flight - low, horizontal, much flapping, little gliding. Perhaps immature grey-back tern.	
	1306	Wedgetail	1	NNW	low		
	1316	"	1	NNW	"		
<del>1-1</del>	1341	Bonin Is.	1	SSE	"	Got up off water	F-2-35
<del>4-30F</del>	1352	Sooty Tern	5	ENE	low	Not feeding	
<del>1-2</del>		Fairy Tern	2				
		wedgetail	1-2				
<del>1-1</del>	1352	Tropicbird(?)	1	ENE	50'	over flock - RWM.	
F	1400	Sooty Tern	200 300 ± 2	NNW	50'	Not feeding	
	1400	Wedgetail	1	SSW	low		
<del>1-3</del>	1404	Frigate	23	⊙	75'	over flock of Sooty Terns	
<del>1-1</del>	1414	Fairy Tern	1	E	low		
	1414	Bird	1	WSW	low		
	1425	Wedgetail	1	SSE	"		
<del>1-1</del>	1445	White Neck	1	SSE	"		
	1501	Wedgetail	1	SSE	"		
	1521	Sooty tern	2	SSE	80'		
<del>1-1</del>	1539	R-T Tropic	1	WNW	100'		
	1549	Bird	1	ESE	low	Flaw like tern, upper wing markings like R-F Booby, appeared dark below.	
	1555	Sooty tern	1	SSE	"		
	1556	Shear Pet	2	SSW	"		
	1623	Wedgetail 1 Sh.	1	NNW	Low		
<del>1-1</del>	1648	Bulwer's Petrel	1	SSE	Low		
	1725	Wedgetail	1	WNW	"		
	1725					3 Porpoises SSE jumped out of H <sub>2</sub> O spouts 3-5' high	
	1815	Wedgetail	3	SSE	low		
	1825					Sunset	
	1825	Wedgetail	1	low	Low		
	2040	Bird	1	NNW	50'	Possibly tropicbird - flutter, flight, white	
	2052	Bird	1	NNW	low	off stem	
	2230	Bird	1	WNW	50'		
	2315					Now headed SW change?	

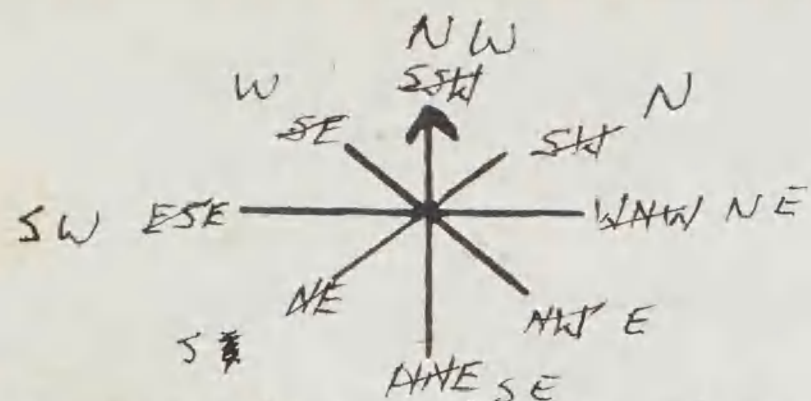




DATE 8 SEPT  
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0020	unknown	1	NE	80'	white bird probably fairy tern	
	0320	BIRD	1	NNE	Low	PROBABLE Pterodroma	
	0335	FAIRY TERN	1	NNE	70'	CALLED + FLAPPING VERY RAPIDLY.	
	0435	TROPICBIRD	1	ESE	80'	HIT MAST.	
	0445	BIRD	1	SSW	15'	whitish - flying in straight line. PROBABLE Tropicbird.	
	0550	TERN	1	NNE	50'	looks like Noddy But flies like Sooty. HIGH Low	
	0610	---	---	---	---	SUNRISE	
	0615	---	---	---	---	Stop for morning station	
4-4	0630	Shear-Pet	1	SSE	low	distant	
5-6	0642	Shear-Pet	1	NN	"	distant	
2-2	0651	Wh. N. Petrel	1	SSE	"	} flying together briefly	
	0651	Sooty Shear	1	SSE	"		
9-16	0651	Shear Pet	1	SSE	"	distant	
	0659	Pterodroma	1	S	"		
	0701	Sooty Shear	1	S	"		
	0715	Pterodroma	1	S	"		
	0715	---	---	---	---	Underway	
4-95	0721	Sooty Tern	1	NNE	40'		
	0725	Pterodroma	1	SSE	Low	Wh Neck or D-Rump	
	0730	---	---	---	---	R-T Tropic found on deck from nighttime collision - flew WNW.	
	0740	Wh NK Petrel	1	SSE	low		
	0746	"	2	SSE	low		
	0751	Pterodroma	2	SSE	low	distant	
	0753	Wh NK Petrel	1	SSE	low		
	0757	Pterodroma	1	SSE	"		
LT	0758	Wh T Tropic	1	NW	80'	circled then flew NW	
LT	0828	R-T Tropic	1	NNE	50'		
	0852	W-n Petrel	1	SSE	LOW		
	0913	Pterodroma	1	SSE	Low	W-n or D-r	
LT	0948	Bulwer's Pet	1	NNE	Low		
F	1000	Sooty Tern	22	2		Not feeding	
4-7		Wedgetail	2				
		Pterodroma	3				
	1012	WEDGETAIL	1	NW	low		
	1019	Pterodroma	1	NW	"		
F	1035	SOOTY TERN	70	---	---	20±5 imm. Flock not feeding	
		WEDGETAIL	5	---	---	Looked like BONIN WITHOUT "HASH MARK" ON UNDERWING. MEDIUM SIZED pterodroma (DARK-RUMPS - JAW. 9 Sept.)	
		PTERODROMA	5	---	---		
	1105	WEDGETAIL	1	NW	LOW	from Fernandez Is. P/9	
	1155	SHEAR-PET	1	NE	LOW	---DISTANT	
	1155	SOOTY TERN	1	"	"		





DATE 8 SEPT 64  
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
<del>1-1</del>	1257	R-T Tropic	1	SSW	130'		
<del>2-2</del>	1311	Wh Neck Pet	1	NNE	low		
<del>5-5</del>	1315	Wedgetail	1	ESE	"		
<del>2-4</del>	1320	Sooty tern	2	ESE	25'		
	1322	"	2	SE	45'		
	1331	Wedgetail	1	NW	low		
	1406	"	1	SE	"		
	1443	Wedgetail	1	SE	Low	dark phase	
	1513	White necked Pet.	1	NNE	Low		
<del>2-2</del>	1623	Bulwers	1	SW	"	Got up off water	
<del>1-1</del>	1710	White Tail Tropic	1	ESE	80'		
<del>1-2</del>	1730	Pterodroma	2	NNE	low		
	1734	Bulwers	1	NNE	low		
	1735	- - -	-	-	-	Change course to NW	
<del>1-1</del>	1741	Shear-Pet	1	SSW	low	possibly Sooty Shearwater; all dark; distant	
	1800	Wedgetail	1	ESE	"		
	1830	- - -	-	-	-	Sundown	
	1842	Shear-Pet	1	W	Low		
	2155	Tropic bird	1	SE	low		
	2200	- - -	-	-	-	TWO VERY BRIGHT FLASHES (BURSTS) OF LIGHT IN SW SKY ABOUT 45° ABOVE HORIZON.	
	2210	- - -	-	-	-	IBID!	
	2210	- - -	-	-	-	COURSE CHANGE TO NE	
	2332	Bird	1	NW	100'	Fairy tern or tropic bird	
	2340	Tropic bird	1	SE	80'		

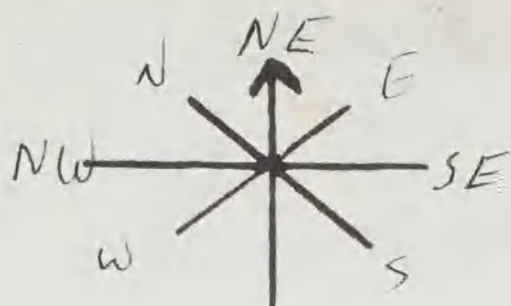




DATE 9 Sept 64  
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0040	Tern ?	1	SW	15'		
	0330	BIRD, Tropic	1	NW	80'	<del>It</del> Flew over, then a minute later came back to the ship but then turned around and went NW again - as if to look at the ship a second time.	
	0510	BIRD	1	S	60'		
	0545	Tropic Bird	1	N	80'		
	0615	Bulwer's Petrel	1	WSW	Low		
	0619					Morning Station also seen in up	
8-10	0621	Sooty Shear	1	S	Low		
1+	0630	Wedgetail	1	NE	Low		
	0700					Underway	
1+	0713	TROPIC BIRD	1	NE	Low	- DISTANT	
5-6	0722	BULWER'S PET.	1	S	"		
	0740	Bulwer's	1	SW	Low		
5-11	0746	SOOTY TERN	1	N	Low		
	0748	" "	3	S	30'		
2-2	0750	DARK-RUMP PET	1	E	Low		
1+	0803	Wh. I. Tropic	1	NE	to 75'	circled ship 3 times	
	0825	Sooty Shear	2	S	Low		
	0838	Sooty Shear	1	S	Low		
2-2	0909	Shear-Pet	1	S	"	distant	
1+	0909	Pterodroma	1	SE	"	W-Nor D-R ; off stern	
	0912	Sooty Tern	2	NW	to 30'		
	0930	Sooty Shear	1	SSE	to 20'		
	0930	Dark Rump P.	1	S	Low		
	0937	Shear-Pet	1	SW	Low	distant, off stern	
	0937	Sooty Tern	4	WSW	50'		
	0948	Sooty Shear	1	S	Low		
1+	0955	Wh. N. (?) Pet.	1	SW	to 20'	White neck seen very briefly	
	1012	Sooty Shear	2	ESE	Low		
	1018	Bulwer's P	1	SW	Low		
1+	1021	Fairy Tern	1	NE	To 50'	appears to be feeding.	
	1026	Bulwer's P	1	SW	Low		
	1030	Sooty Shear	1	ESE	Low		
	1039	Sooty Shear	1	S	Low		
	1045	Bulwer's Pet	2	SW	Low		
2-2	1112	Bonin Is. Pet	1	SE	Low		
	1119	(Bonin Is.) Pet	1	NW	Low		
	1120	Sooty Tern	1	W	50'		

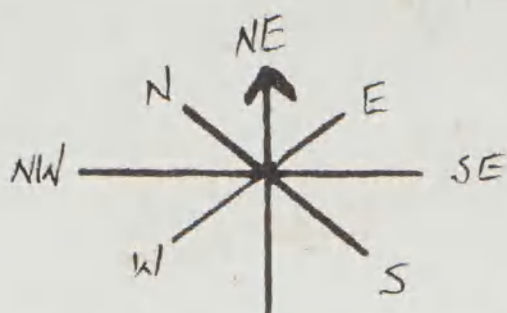




DATE 9 Sept 1964  
Pg. # 2

	time	species	SW #	dir.	hgt.	remarks	loc.
<del>14-30</del>	1132	Sooty Shear	2	SE	Low		
	1136	Sooty Shear	1	SE	Low		
	1153	Sooty Shear	1	SE	Low		
	1156	Sooty Shear	1	SE	Low		
<del>2-2</del>	1159	(Bonin Is) Pet	1	NE	Low		
<del>2-6</del>	1200	Tern, Sooty	5	NE	30'	- 2 immatures not feeding.	
	1215	Sooty Shear	1	SE	Low		
<del>3-3</del>	1250	Bulwer's Pet	1	S	"		
	1332	"	1	N	"		
	1333	Sooty Shear	2	SSE	"		
	1347	"	1	SSE	"		
<del>5-5</del>	1400	Dark-r Petrel	1	NE	Low		
<del>1-1</del>	1418	R-T Tropic	1	NE	Low to 40'		
<del>2-2</del>	1419	Wedgetail Sh	1	SSW	Low		
	1423	Sooty Shear	1	S	Low		
	1426	Sooty Shear	1	SSE	Low		
<del>1-3</del>	1434	Tern	3	NE	60'	distant	
<del>4-4</del>	1436	Pterodroma	1	S	Low		
	1458	Pterodroma	1	S	Low		
	1513	wedgetail	1	SW	Low		
	1514	(Bonin Is) Pet	1	WNW	Low		
	1518	Sooty Tern	1	SW	Low		
	1519	Bulwer's Pet	1	NW	Low		
	1523	Sooty Shear	1	S	To 30'		
	1528	D-R Petrel	1	WSW	Low		
	1607	" "	1	NNW	"		
	1608	SOOTY SHEAR	1	SE	"		
	1608	" "	1	"	"		
	1615	" "	1	"	"		
	1622	PTERODROMA	1	SW	"	- W-N or D-r.	
	1630	SOOTY SHEARWATER	2	S-SE	"	Noted light colored bill.	
	1634	D-R. PETREL	1	NW	"		
	1636	SOOTY SHEAR	1	SE	"		
	1640	" "	1	"	"		
	1641	PTERODROMA	1	SW	"	W-N or D-r.	
	1647	SOOTY SHEAR.	1	SE	"		
	1648	" "	1	SE	"		
	1649	" "	1	"	"		
	1649	D-r. Petrel	1	NW	"		
	1651	SOOTY SHEAR	1	SW	"		
	1652	" "	3	SE	"		
	1652	" "	4	"	"		





DATE 9 SEPT. 64  
Pg. # 3

	time	species	SW #	dir.	hgt.	remarks	loc.
31-57	1654	SOOTY SHEAR	1 ✓	SE	LOW		
L-T	1656	SKUA (S) (?)	1	N-NE	70'	white wing patches seen by P.W. (could have been larger - quite typically resembled skuas seen previously though full?)	
	1700	SOOTY SHEAR	1 ✓	SE	LOW		
	1701	" "	1 ✓	SE	LOW		
	1702	" "	1 ✓	S-SW	"		
	1703	" "	1 ✓	SE	"		
	1706	" "	1 ✓	SE	"		
F	1706	" "	5 ✓	"	"	Not feeding - free	
	1707	" "	2	"	"		
	1708	" "	1 ✓	"	"		
	1709	" "	1 ✓	"	"		
H-T	1709	Bulwer's	1	"	"		
	1711	Sooty shear	3	"	"		
	1714	"	1 ✓	"	"		
	1716	"	1 ✓	"	"		
	1717	"	1 ✓	"	"		
H-T	1718	Pterodroma	1	NW	"		
	1718	Sooty shear	4 ✓	SE	"		
	1719	"	1 ✓	SE	"		
	1720	"	5 ✓	"	"		
	1721	"	1 ✓	S	"		
	1722	"	3 ✓	SE	"		
H-T	1723	<sup>Bonin Is.</sup> <del>Pterodroma</del>	1	NW	"		
	1724	Sooty shear	1 ✓	SE	"		
	1725	"	5 ✓	"	"		
	1726	"	1 ✓	"	"		
	1727	"	1 ✓	"	"		
	1728	"	2 ✓	"	"		
	1729	"	1 ✓	"	"		
H-T	1730	Wh Neck Pet	1	NW	"		
	1731	Sooty shear	3 ✓	SE	"		
	1732	"	4 ✓	"	"		
	1733	"	1 ✓	"	"		
	1734	"	1 ✓	"	"		
	1735	"	1 ✓	"	"		
	1736	"	1 ✓	"	"		
			62				

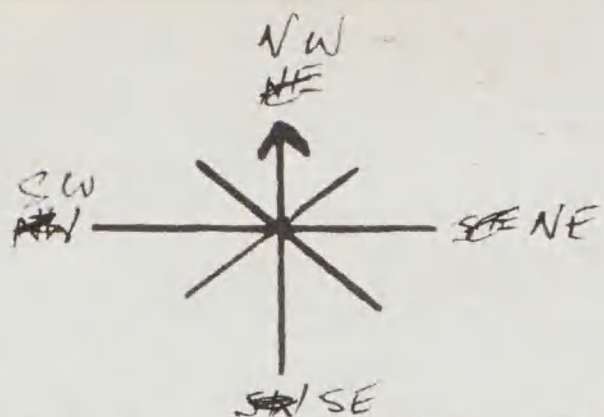




DATE 9 SEPT 64  
Pg. # 4

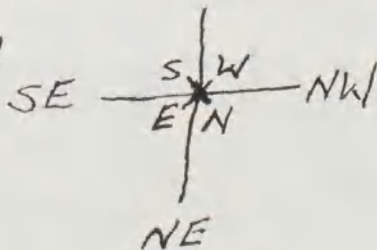
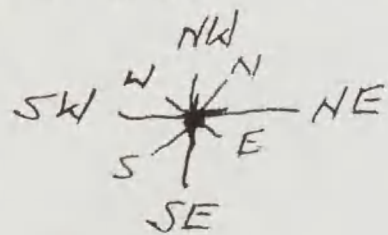
	time	species	#	dir.	hgt.	remarks	loc.
41-60	1737	SOOTY SHEAR	2	SE	LOW		
	1740	" "	1	"	"		
	1741	" "	2	"	"		
	1742	" "	1	"	"		
	1745	" "	1	"	"		
3-4	1745	D.-r. Petrel	2	SW	"		
	1747	SOOTY SHEAR	2	SE	"		
	1748	" "	1	"	"		
	1750	" "	1	"	"		
	1751	" "	1	"	"		
	1751	" "	1	"	"		
	1751	" "	1	"	"		
	1752	" "	1	NW	"		
	1753	" "	2	SE	"		
	1753	" "	1	E	"		
2-2	1753	SOOTY TERN	1	SW	40'		
	1755	" "	1	W	LOW		
	1755	SOOTY SHEAR	1	NW	"		
	1755	" "	4	SE	"		
	1757	D.-r. Petrel	1	SE	"		
HT	1757	WEDGETAIL	1	<del>SE</del>	"		
HT	1759	Pterodroma	1				
	1759	SOOTY SHEAR	1	SE	"		
	1800	" "	2	SE	"		
	1800	" "	1	"	"		
	1801	" "	1	"	"		
	1802	" "	3	"	"		
	1802	" "	1	"	"		
	1803	" "	1	"	"		
	1803	" "	2	SW	"		
	1803	" "	2	"	"		
	1804	" "	2	SE	"		
	1805	" "	1	SW	"		
	1806	" "	1	"	"		
	1808	" "	2	SE	"		
	1813	" "	2	S	"		
	1814	" "	1	"	"		
	1815	D.-r. Petrel	1	NW	"		
	1815	SOOTY SHEAR	2	SE	"		
	1816	" "	1	"	"		
	1817	" "	3	"	"		
	1817	" "	1	"	"		
	1818	" "	2	"	"		
	1819	" "	1	"	"		
	1819	" "	1	"	"		
	1819	" "	1	"	"		
	1819	" "	1	"	"		
	1820	" "	1	"	"		



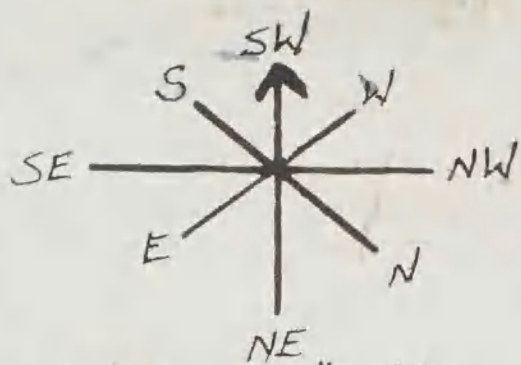


DATE 9 SEPT 64  
Pg. # 5

time	species	#	dir.	hgt.	remarks	loc.
1821	SOOTY SHEAR	1	S	Low		
1822	" "	1	S	"		277
1822	" "	1	S	"		67
1823	" "	2	S	"		67
1824	- - -	5	-	-	- Sunset	67
1824	" "	1	S	"		212
1826	" "	1	S	"		19
1826	" "	1	S	"		230
1826	" "	1	S	"		
1829	" "	1	S	"		
1830	" "	1	S	"		
1831	" "	1	S	"		
1840	" "	2	S	"		
1840	" "	1	S	"		
1842	" "	1	S	"		
1845	" "	1	S	"		
1900	- - -	-	-	-	- Change course to NW	
2134	SOOTY TERN	1	NE	30'	CALLING	
2137	" "	1	"	50'	"	
2204	SOOTY SHEAR	1	SE	To 30'		
2206	" "	1	SE	"		
2236	SMALL PTERODROMA	1	E	Low	PROBABLE BONIN Is. Petrel.	
2243	SOOTY SHEAR.	1	SE	To 30'		
2257	" "	1	SE	"		
2303	SOOTY TERN	1	NW	60'		
2304	SOOTY SHEAR	1	SE	To 30'		
2323	" "	1	⊙	60'	circled ship	
2340	- - -	-	-	-	- COURSE CHANGE TO SW	
2354	BIRD	1	NE	70'	TROPIC BIRD OR TERN	





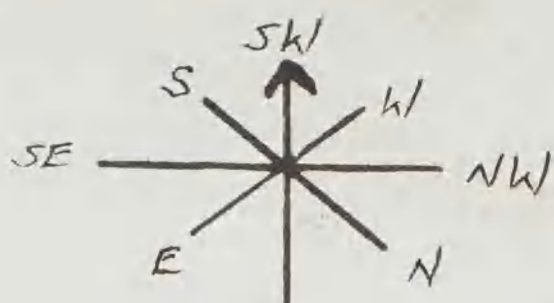


3RD LEG

DATE 10 SEPT 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0056	R-T Tropic	1	NE	70'	NOTE: SOOTY SHEARWATERS LOGGED IN NUMBERS LARGER THAN 5 ARE THE <u>TOTAL NUMBER SEEN IN THE BINOCULAR</u> <u>SCAN</u> FOR THE TIME INDICATED, UNLESS THE TIME IS PRECEDED BY "F". THIS (F) INDICATES A FLOCK - FLYING TOGETHER. <i>FD</i> .	
0115	Tropicbird	1	NE	60'		
0240	Fairy Tern	1	E	80'		
0300	Bird	1	NE	65'		
0321	Bird	1	NE	low		
0330	Tropicbird	1	Q-S	40'		
0335	Bird	1	N	low		
0350	---	---	---	---	Rain squalls	
0352	R.T. Tropicbird	1	NE	50'	calling	
0354	Fairy Tern	1	ENE	low		
0356	Tropicbird	1	E	20'		
0400	"	1	NE	50'		
0401	Sooty Tern	1	NE	30'		
0405	W.T. Tropic	1	Q	low	May have got up off water	
0415	Sooty Tern	1	NE	50'		
0421	" "	2	NE	40'	calling	
0431	" "	1	ESE	50'	"	
0434	Bird	1	E	50'	Tropicbird or Sooty Tern	
0455	Tropicbird	1	SE	low		
0550	Pterodroma	1	SW	low		
0610	---	---	---	---	SUNRISE - RAINY	
0620	---	---	---	---	STOP FOR OCEANOGRAPHIC SAMPLING.	
16-50 0624	SOOTY SHEAR	1	S	Low		
0624	" "	3	SW	"		
0626	" "	8	"	"		
0629	" "	1	"	"	Loose string	
0629	" "	2	"	"		
0630	" "	1	"	"		
0632	" "	15	"	"		
0632	" "	4	E	"		
0633	" "	3	SW	"		
0635	" "	1	"	"		
0638	" "	1	"	"		
0640	BONIN TYPE - Pterodroma	1	"	"		
0642	SOOTY SHEAR	3	S	"		
0645	" "	3	SW	"		
0645	D.-r. Petrel	1	"	"		
0649	SOOTY SHEAR	2	S	"		
0650	WEDGE TAIL	1	Q	"		
0650	SOOTY SHEAR	1	SW	"		
0651	" "	1	SW	"		



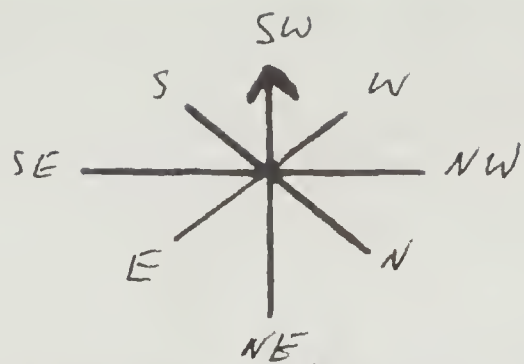


DATE 10 SEPT 64  
Pg. # 2

time	species	#	dir.	hgt.	remarks	SEAS RELATIVELY HIGH	loc.
<del>17-25</del> 0701	SOOTY SHEAR	2	S	TO 30'			
0704	"	4	SE	"			
0705	"	2	"	"			
0714	"	2	"	"			
0715	"	2	"	"			
<del>14-11</del> 0722	Pterodroma	1	NW	Low	- UNDERWAY - following OCEANOGRAPHIC SAMPLING.		
<del>4-5</del> 0724	BONIN Is.	1	NW	"	DISTANT		
0733	PTERODROMA	1	"	"			
<del>3-2</del> 0742	WEDGETAIL	1	S	"	DISTANT		
0743	PTERODROMA	1	"	"			
0744	"	1	NW	"	DISTANT		
0754	WEDGETAIL	1	SE	"	"		
0805	Sooty shear	1	SSE	"			
0809	"	1	"	"			
0810	Pterodroma	1	N	"			
0811	Bonin Is.	1	NNW	"			
0812	Sooty shear	2	SSE	"			
0815	-	-	-	-	10 min. squall		
0825	Sooty tern	1	NNW	"	even dark rain for 1		
0827	Pterodroma	1	"	"	Wh Nk or DK rump		
0828	Sooty shear	1	SSE	"			
0830	"	1	"	"			
<del>2-2</del> 0832	Shear-Pet	1	WNW	"	lost		
0833	Pterodrome	1	WNW	"			
0836	Sooty shear	1	SSE	"			
0841	"	1	"	"	engines slowed for mech trouble		
0844	"	1	"	"			
0847	"	1	"	"			
0848	"	2	"	"			
0849	"	1	"	"			
0850	"	1	"	"			
0850	Pterodroma	1	"	"			
0850	"	1	NNW	"			
0854	Bonin Is.	1	SSE	"			
0857	Shear-Pet	1	NNW	"	distant		
0859	Sooty shear	1	SSE	"			
0901	Bonin Is.	2	NNW	"			
0901	Pterodroma	1	NNW	"	(White Nk!)		
0904	"	1	"	"			
0905	-	-	-	-	- resume full speed		

We are assuming, I assume, that Pterodroma means Wh Nk or DK rump, not Bonin.

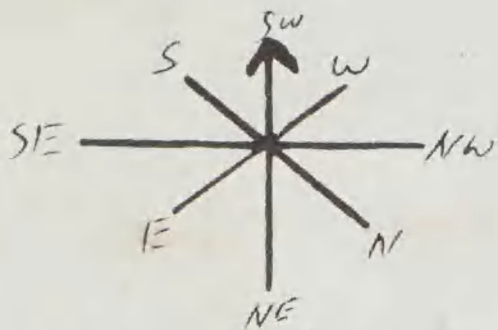




DATE 10 Sept 64  
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
<del>22-29</del>	0910	Sooty shear	1	SSE	Low		
	0912	"	1	"	"		
<del>4-4</del>	0916	Wedgetail	1	SW	"		
<del>3-3</del>	0917	Pterodroma	1	NNW	"		
<del>1-1</del>	0920	Bonin Is.	1	NNW	"		
	0924	Sooty shear	1	SSE	"		
	0924	"	1	SE	"		
	0925	"	1	"	"		
	0925	"	1	"	"		
	0932	"	1	SSE	"		
	0933	"	1	"	"		
	0934	"	1	"	"		
	0935	"	1	"	"		
	0936	Pterodroma	1	NNW	"	Wh NK?	
	0945	Sooty shear	1	SSE	"		
<del>2-2</del>	0953	Wh NK Pet	1	NW	"		
	0956	Sooty shear	1	SSE	"		
	0957	"	1	"	"		
	0959	Wh NK Pet	1	NNW	"		
	1008	Sooty shear	1	SSE	"		
	1010	Sooty Shear.	1	SSE	Low		
	1023	Sooty Shearwater	1	SE	Low		
	1024	" "	1	SE	Low		
	1026	" "	1	S	"		
	1029	" "	2	S	"		
	1031	Pterodroma	1	SE	Low	Possibly dark rumped - Petrel	
<del>2-2</del>	1031	Shearwater-Petrel	1	NE	Low		
	1033	Sooty Shearwater	1	S	Low		
	1038	Shearwater Petrel	1	S	Low		
<del>1-3</del>	1042	Sooty Tern	3	NE	40'		
	1044	Sooty Shearwater	1	S	Low		
		Bl "	1	S	"		
	1050	Wedge Tail Sh.	1	"	"		
	1051	" "	1	"	"		
	1052	" "	1	"	"		
	1053	" "	1	"	"		
	1056	Sooty Shearwater	1	S	Low		



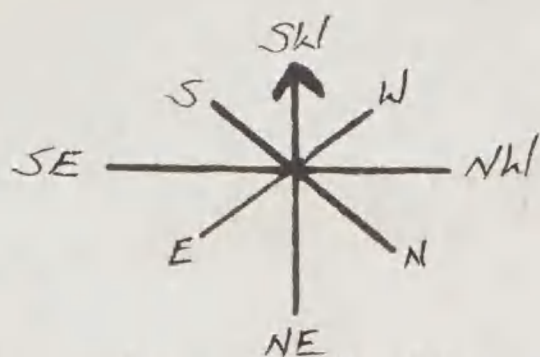


DATE 10 Sept 1964  
Pg.# 4

	time	species	#	dir.	hgt.	remarks	loc.
32-41	1106	Sooty Shearwater	1	S	Low		
	1108	" "	1	S	Low		
	1110	" "	3	SE	Low to 15'		
	1120	" "	1	"	"		
	1124	" "	1	"	"		
	1127	" "	1	N	"		
5-5	1130	Fairy Tern	1	E	"		
	1133	" "	1	SE	30'		
	1133	Sooty Shearwater	1	SW	Low		
1-1	1137	Bonin Is. Pet.	1	S	Low		
	1139	Sooty Shearwater	1	SW	Low		
	1200	" "	1	NW	"		
	1205	" "	1	SSE	"		
	1210	" "	1	SSE	"		
	1211	" "	2	"	"		
	1211	" "	1	"	"		
	1213	Fairy Tern	1	S	"		
	1213	Sooty Shear	1	SSE	Low		
3-3	1215	Pterodroma	1	S	"		
	1216	Sooty Shear	5	SSE	"		
1-1	1217	D.-Y. Pet.	1	⊙	TO 60'	- APPROACHED SHIP, FLEW HIGH, BARFED, FLEW DOWN TO	
2-21	1217	Tern, Sooty	1	SE	Low		
5-5	1220	Sooty Shear	1	SE	"		
	1220	Pterodroma	1	S	"		
	1222	Sooty Shear	2	SSE	"		
	1223	Fairy Tern	1	S	20'		
	1224	Sooty Shear	1	SSE	Low		
	1225	Pterodroma	1	S	Low		
	1226	Fairy Tern	1	S	30'		
	<del>1226</del>	<del>Sooty Shear</del>					
	1230	Sooty Shear	3	SSE	Low		
	1233	" "	2	"	"		
F	1234	Sooty Tern	20-25	⊙	TO 40'	Not SEEN TO FEED - DISTANT.	
	1236	Sooty Shear	1	SSE	Low		
	1237	Fairy Tern	1	W	10'		
	1238	Sooty Shear	1	SSE	Low		
	1238	" "	1	"	"		
	1238	" "	1	"	"		
	1239	" "	1	SW	"		
	1240	" "	2	SSE	"		
	1242	" "	1	"	"		
	1242	" "	1	"	"		
	1242	" "	1	"	"		
	1243	" "	1	SSE	"		
	1244	" "	1	"	"		
	1246	" "	1	"	"		

F - 1-20  
FF - 0-0

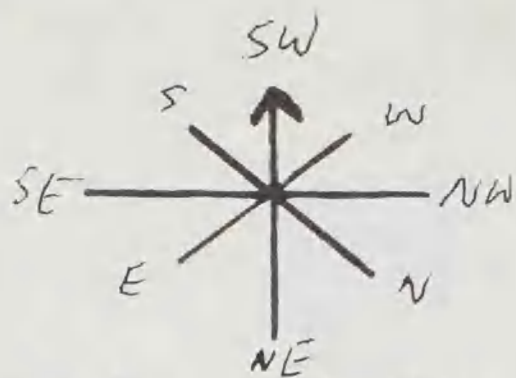




DATE 10 SEPT 64  
Pg. # 5

	time	species	#	dir.	hgt.	remarks	loc.
<del>33-37</del>	1248	SOOTY SHEAR	1	SSE	LOW		
	1248	" "	1	"	"		
	1250	" "	1	"	"		
	1250	" "	1	"	"		
1-1	1251	SHEAR - PET.	1	NE	"		
	1253	SOOTY SHEAR	1	SSE	"		
	1255	" "	1	"	"		
	1256	" "	2	"	"		
	1256	" "	1	"	"		
	1256	" "	1	"	"		
	1258	" "	1	"	"		
	1259	" "	1	"	"		
	1300	" "	1	"	"		
	1301	" "	1	SW	"		
	1304	" "	1	SSE	"		
	1306	" "	1	"	"		
3-6	1307	Wedgetail	1	NW	"		
	1309	Sooty shear	1	SSE	"		
	1310	" "	1	"	"		
2-2	1313	Bonin Is.	1	SE	"	Type - no hash mark on underwing - very	
	1315	Sooty shear	2	SSE	"	Broad trailing + leading edges on underwing.	
	1315	" "	1	"	"	Contrasting dark w on light back.	
	1316	" "	1	"	"	nigripennis PH	
	1317	" "	1	"	"		
	1319	" "	1	"	"		
	1320	Bonin Is.	1	NNW	"	type - no hash - IBID.	
	1324	Wedgetail	1	SE	"		
	1325	Sooty shear	1	SSE	"		
	1328	Wedgetail	1	SE	"		
	1329	" "	1	"	"		
	1331	" "	1	"	"		
	1331	" "	1	"	"		
	1331	Sooty shear	1	SSE	"		
	1334	" "	1	"	"		
	1338	" "	1	"	"		
	1341	" "	1	"	"		
	1342	" "	1	"	"		
	1344	" "	1	"	"		
	1350	" "	1	"	"		
	1354	" "	1	"	"		
	1355	" "	3	"	"		
	1356	" "	1	"	"		
			46				





DATE 10 Sept 64  
Pg. # 6

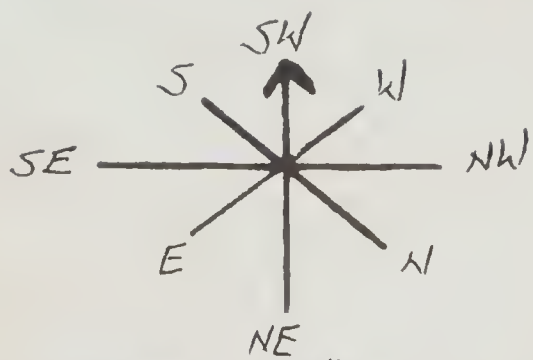
	time	species	#	dir.	hgt.	remarks	loc.
3574	1357	Sooty shear	1	SSE	low		
	1358	"	1	"	"		
	1402	"	3	"	"		
	1406	Sooty Shear	3	SSE	Low		
	1410	"	3	SSE	Low		
	1411	"	2	SSE	Low		
	1416	Sooty Shear	1	SSE	Low		
	1418	"	3	SSE	Low		
	1421	Sooty Shear	1	SSE	Low		
	1428	"	1	SSE	Low		
	1431	Sooty Shear	1	SSE	Low		
	1435	Sooty Shear	1	SSE	Low		
22	1436	Bulwer's Pet	1	S	Low		
	1439	Sooty Shear	1	SSE	Low		
F	1443	Sooty Shear	20	SSE	Low	Not feeding - full.	
	1446	Sooty Shear	1	SSE	Low		
	1448	Sooty Shear	1	SSE	Low		
	1451	Sooty Shear	1	SSE	Low		
	1504	Bulwer's Pet	1	NW	Low		
127	1506	(Bonin Is) Pet	1	NNW	Low		
	1509	Sooty Shear	2	SSE	Low		
	1510	"	5	SSE	Low		
	1510	"	1	SSE	Low		
	1511	"	1	SSE	Low		
	1514	"	1	SSE	Low		
	1516	"	1	SSE	Low		
	1517	"	1	SSE	Low		
	1518	"	1	SSE	Low		
	1528	"	1	SSE	Low		
	1530	"	3	SSE	Low		
	1532	"	1	SSE	Low		
3-3	1537	Pterodroma	1	NNW	Low		
	1541	Sooty Shear	1	SSE	Low		
41	1543	R-T Tropic	1	E	80'		
	1546	Sooty Shear	2	SSE	Low		
	1550	"	2	SSE	Low		
	1550	"	1	SSE	Low		
	1553	"	2	SSE	Low		
	1557	Pterodroma	1	N	Low		
	1600	Sooty Shear	1	SSE	Low		
	1610	"	2	"	"		
41	1612	WEDGETAIL	1	<del>SSE</del>	"		
	1615	PTERODROMA	1	SW	"		

F-1-20  
FF-0-0

Not feeding - full.

82

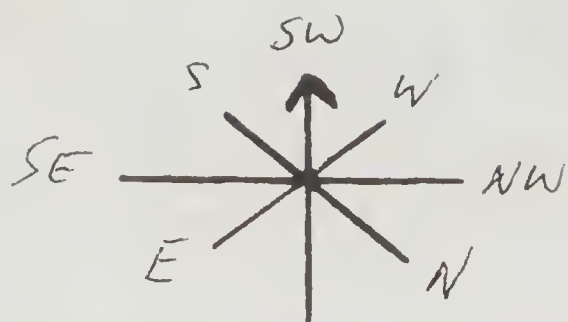




DATE 10 SEPT. 64  
Pg. # 7

time	species	#	dir.	hgt.	remarks	loc.
1617	SOOTY SHEAR.	4	SSE	LOW		
1619	"	1	"	"		
1620	"	1	"	"		
1620	"	2	"	"		
1621	"	3	"	"		
1625	"	4	"	"		
1626	"	5	"	"		
1628	"	3	"	"		
1631	"	3	"	"		
1631	"	1	"	"		
1633	"	3	"	"		
1633	"	1	NE	"		
1637	"	2	SSE	"		
1638	"	2	"	"		
1639	"	4	"	"		
1641	"	6	"	"		
1641	"	3	"	"		
1644	"	5	"	"		
1645	"	1	"	"		
1648	BULWER'S	1	NW	"		
1653	SOOTY SHEAR	2	S-SE	"		
1654	"	1	"	"		
1655	"	1	"	"		
1657	"	2	"	"		
1658	"	1	"	"		
1702	"	4	"	"		
1704	"	2	"	"		
1705	"	2	"	"		
1708	"	1	"	"		
1711	"	2	"	"		
1712	"	1	"	"		
1713	"	1	"	"		
1713	"	1	"	"		
1713	"	1	"	"		
1715	Bonin Is.	1	NNW	"		
1716	Sooty shear	1	SSE	"		
1717	"	2	"	"		
1717	"	1	"	"		
1719	"	1	"	"		
1721	"	1	"	"		
1722	"	1	"	"		
1722	"	1	"	"		

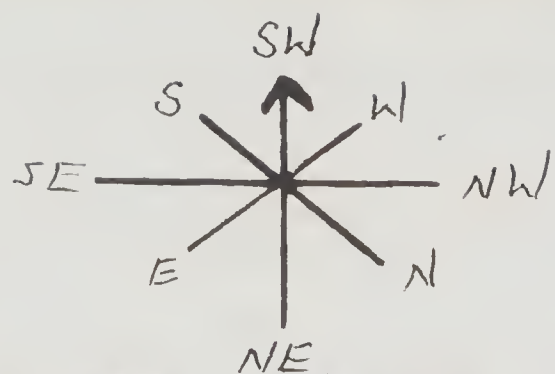




DATE 10 Sept 1964  
Pg. # 8

time	species	#	dir.	hgt.	remarks	loc.
37-92 1725	Sooty shear	2	S ✓	low		
1726	"	1	SSE ✓	"		
1727	"	3	"	"		
1727	"	1	"	"		
1728	"	1	"	"		
1729	"	2	"	"		
1730	"	1	"	"		
1732	"	2	"	"		
1734	"	1	"	"		
1735	"	2	"	"		
2-2 1735	Bonin Is	1	NNW	"		
1736	Sooty shear	2	SSE	"		
1737	"	1	"	"		
2-2 1739	Bulwer's	1	NNW	"		
1740	Sooty shear	1	SSE ✓	"		
1741	Bulwer's	1	NNW	"		
1742	Sooty shear	1	SSE	"		
1742	"	1	"	"		
1743	"	1	"	"		
1744	"	3	"	"		
1745	"	1	"	"		
1745	"	1	"	"		
1746	Bonin Is.	1	"	"		
1747	Sooty shear	2	"	"		
1747	"	1	"	"		
1748	"	2	"	"		
1749	"	3	"	"		
1750	" "	2	"	"		
1751	" "	3	"	"		
1751	" "	1	"	"		
1753	" "	+	"	"		
1754	" "	2	"	"		
1756	" "	3	"	"		
1758	" "	3	"	"		
1800	" "	2	"	"		
1802	" "	2	"	"		
1803	" "	2	"	"		
1804	" "	3	"	"		
1804	SHEAR - PGT.	1	N	"		
1805	SOOTY SHEAR	2	S-SE	"		
1806	" "	5	"	"		
1807	" "	5	"	"		
		77				

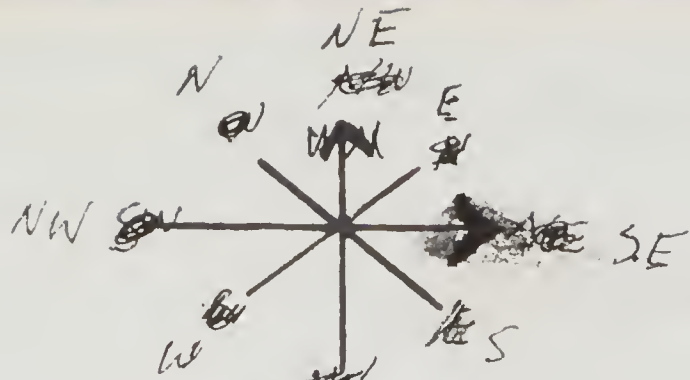




DATE 10 SEPT 64  
Pg. # 9

	time	species	#	dir.	hgt.	remarks	loc.
<del>13-37</del>	1810	SOOTY SHEAR	10	S-SE	LOW		
	1810	"	2	"	"		
	1812	"	3	"	"		
	1812	"	1	"	"		
	1814	"	5	"	"		
	1815	"	3	"	"		
	1818	"	2	"	"		
	1820	"	1	"	"		
	1824	"	2	"	"		
	1827	"	1	"	"		
	1828	"	1	"	"		
<del>13-41</del>	1828	PTERODROMA	1	W	"		
	1829	SOOTY SHEAR	4	S-SE	"		
<del>13-41</del>	1829	R.-J. TROPIC	1	NE	"	AROSE FROM H <sub>2</sub> O	
CA	1830	SOOTY SHEAR.	2	S-SE	"	- - - SUNSET	
<del>13-41</del>	1832	"	2	"	"		
	1835	"	1	"	"		
	1836	"	3	"	"		
	1837	"	1	"	"		
	1837	"	1	"	"		
	1837	"	1	"	"		
	1839	"	1	"	"		
	1839	Pterodroma	2		"		
	1840	Sooty Shearwater	6	SSE	"		
	"	"	2	"	"		
	1843	"	1	"	"		
	1844	"	1	"	"		
	1845	"	1	"	"		
	1845	Bulwer's Petrel	1	NNW	"		





DATE 10 Sept 1964  
Pg. # 10

time species <sup>SW</sup> # dir. hgt. remarks loc.

1850					change course to NW.	
2005	Sooty Shearwater	1	NW	Low		
2259	Pterodroma	1	NW	low		
2340	- - -	-	- -	- -	change course to NE	
2352	Sooty Shear	1	NW	low		
0						

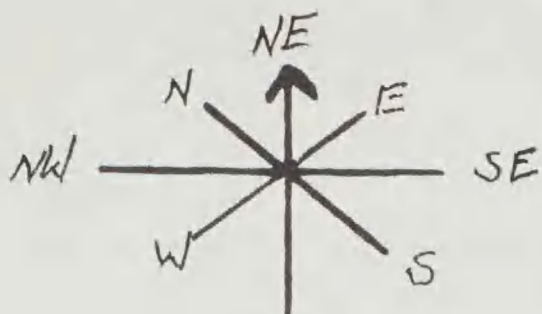




DATE 11 Sept 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0022	- - -	-	-	-	- flash over NW horizon	
0150	Bird				calling	
0155	Shear-Pet	1	SSE	low		
0228	Fairy tern	1	NE	10'		
0607	Sooty Shear	1	SE	low	SUNRISE!	
0613	"	2	SSE	Low		
0625	- - -	-	-	-	- Morning Station	
0627	Sooty Shear	3	SE			
0627	Wedgetail	1	SE	low		
0630	Sooty Shear	1	E			
0633	"	1	E		: apparently following around ship	
0646	"	1	E			
0658	"	1	E			
0658	Shear-Pet	1	SE	low		
0700	Sooty Shear	2	E			
0700	- - -	-	-	-	- Underway	
0715	Bulwers	1	SE	low		
0737	Sooty Shear	1	SE	low		
0739	"	1	?	"		
0741	Shear-Pet	1	W?	"		
0747	Sooty Shear	2	SE	"		
0750	"	1	SE			
0755	"	3	SE			
0755	W.N. Petrel	1	N	low		
0757	Sooty Tern	3	E	"		
0757	Sooty Shear	4	SE	"		
0757	Wedgetail	1	SE	"		
0804	SOOTY SHEAR	2	SE	"		
0804	"	2	"	"		
0806	"	2	"	"		
0807	"	1	"	"		
0809	"	1	"	"		
0812	"	2	"	"		
0814	"	2	"	"		
0816	D.-N. Petrel	1	"	"		
0818	SOOTY SHEAR	1	"	"		
0818	"	1	"	"		
0819	"	1	"	"		
0820	"	1	"	"		
0824	"	1	"	"		
0824	SHEAR-Pet	1	SW	"		
0825	W.-N. Petrel	1	S	"		
0827	Pterodroma	1	NNW	"		





DATE 11 SEPT 64  
Pg. # 2

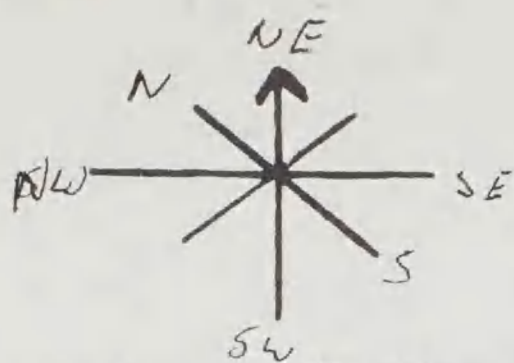
	time	species	#	dir.	hgt.	remarks	loc.
24-43	0830	SOOTY SHEAR	2	SE	LOW		
8-11	0830	WEDGETAIL	1	SSE	"		
4-4	0832	PTERODROMA	1	S	"	DISTANT	
	0833	SOOTY SHEAR	1	SE	"		
	0834	Wedgetail	1	SSE	"		
	0835	Sooty shear	1	"	"		
	0836	"	5	"	"		
	0836	Pterodroma	1	"	"		
	0837	Wedgetail	1	"	"		
	0838	"	1	"	"		
	0842	"	3	"	"		
1-3	0842	W.-N. Petrel	3	"	"		
	0845	WEDGETAIL	1	<del>SE</del>	"		
2-3	0847	BONIN TYPE	1	NW	"		
	0847	WEDGETAIL	2	"	"		
	0855	SOOTY SHEAR	1	SE	"		
3-2	0900	D.-r. Petrel	1	SW	"		
	0903	WEDGETAIL	1	S	"		
	0905	SOOTY SHEAR	1	SE	"		
	0907	"	1	"	"		
	0907	"	1	"	"		
	0910	"	2	"	"		
	0912	"	1	"	"		
	0915	"	2	"	"		
	0919	"	1	"	"		
	0920	"	1	"	"		
	0920	D.-r. Petrel	1	W	"		
	0928	SOOTY SHEAR	1	SSE	"		
	0930	"	2	"	"		
	0934	"	2	"	"		
F	0942	"	4	"	"	Not Feed.	
	0945	"	1	"	"		
	0945	PTERODROMA	1	S	"		
	0948	"	1	N	"		
LT	0948	SOOTY TERN	1	"	10		
	0949	SOOTY SHEAR	1	SSE	LOW		
	0953	"	1	"	"		
	0954	"	4	"	"		
LT	0956	Bulwer's	1	"	"		
	0958	Sooty shear	1	"	"		
	1000	"	1	"	"		
	1001	"	1	"	"		
	1001	"	1	"	"		
	1003	"	1	SSE	"		
	1011	(Bonin's) P	2	ESE	LOW		

F-1-L  
FF-0-0

61  
3  
68

03

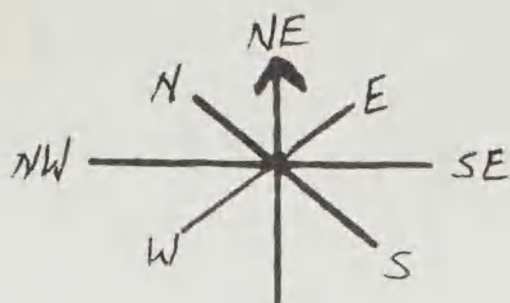




DATE 11 Nov. Sept 64  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
36-56 1012	Sooty Shear	1	SSE	Low		
1012	Pterodroma	1	NNW	Low		
1014	Sooty Shear	1	SSE	Low		
1017	Sooty Shear	1	SSE	Low		
1022	"	2	SSE	Low		
1025	"	3	SSE	Low		
1026	"	2	SSE	Low		
1028	"	2	SSE	Low		
1034	"	2	SSE	Low		
1034	"	1	SSE	Low		
1036	"	2	SSE	Low		
1041	"	3	SSE	Low		
1043	"	1	SSE	Low		
1045	"	1	SSE	Low		
1047	"	2	SSE	Low		
1049	"	2	SSE	Low		
1051	"	3	SSE	Low		
1054	"	1	SSE	Low		
1056	"	1	SSE	Low		
2-3 1056	D-r Petrel	1	SW	Low		
1100	Sooty Shear	3	SSE	Low		
1101	"	1	SSE	Low		
1106	"	1	SSE	Low		
1107	"	1	SSE	Low		
1108	"	1	SSE	Low		
1110	"	4	SSE	Low		
1111	"	1	SSE	Low		
1114	"	1	SSE	Low		
1115	"	1	SSE	Low		
1120	"	1	SSE	Low		
1128	"	1	SSE	Low		
1134	"	1	SSE	Low		
1141	"	2	SSE	Low		
1146	"	1	SSE	Low		
1153	"	1	SSE	Low		
1155	"	2	SSE	Low		
1157	"	1	SSE	Low		
1202	(Bonin Is) Pet	1	SW	Low		
1241	D-r. Pet.	2	W	"		
1246	SOOTY SHEAR	1	SE	"		
		9				



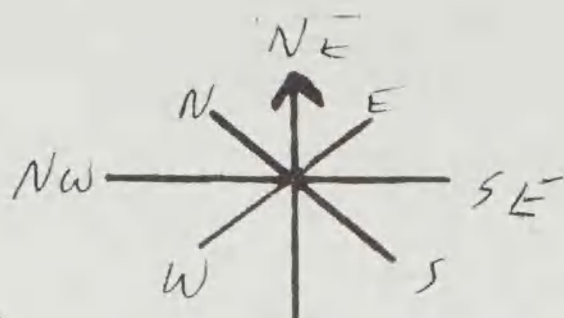


DATE 11 SEPT 64  
Pg. # 4

	time	species	SW #	dir.	hgt.	remarks	loc.
39-99	1301	SOOTY SHEAR	1	SE	Low		
	1310	" "	5	"	"		
	1311	" "	1	"	"		
	1312	" "	1	"	"		
	1314	" "	1	"	"		
	1314	" "	1	"	"		
	1316	" "	1	SSE	"		
5-6	1316	D.-R. PETREL	2	"	"		
	1321	SOOTY SHEAR	2	SW	TO 60'		
			2	SSE	LOW		
	1322	" "	5	"	"		
	1324	" "	1	"	"		
	1327	" "	1	"	"		
	1329	" "	1	"	"		
	1331	" "	2	"	"		
	1331	" "	4	"	"		
	1333	" "	3	"	"		
	1334	" "	4	"	"		
	1336	" "	4	"	"		
	1337	" "	1	"	"		
	1338	" "	5	"	"		
	1341	" "	6	"	"		
	1343	" "	1	"	"		
	1345	" "	1	"	"		
	1345	" "	2	"	"		
	1345	D.-r. Petrel	1	NW	"		
WT	1345	WEDGE TAIL	1	"	"		
	1346	D.-r. Pet.	2	"	"		
2-3	1346	Pterodroma	2	"	"		
1-4	1346	BONIN TYPE	1	SW	"		
	1350	SOOTY SHEAR	1	SSE	"		
	1352	" "	1	"	"		
	1352	" "	3	"	"		
	1353	" "	1	"	"		
	1354	" "	2	"	"		
	1354	" "	2	"	"		
	1354	PTERODROMA	1	NW	"		
1-4	1356	FAIRY TERN	1	NE	Low		
	1356	SOOTY SHEAR	8	SSE	"		
	1358	" "	3	"	"		
	1401	" "	7	"	"		
	1405	" "	2	"	"		
	1410	" "	4	SSE	Low		
	1410	D-r Petrel	1	SSE	to 40'	lighter wing.	
	1414	SOOTY Shear	2	SSE	Low		
	1415	" "	3	SSE	Low		
	1417	" "	2	SSE	Low		
	1418	" "	1	SSE	Low		
	1422	" "	2	SSE	Low		
111	1424	D-r Petrel	1	S	Low		



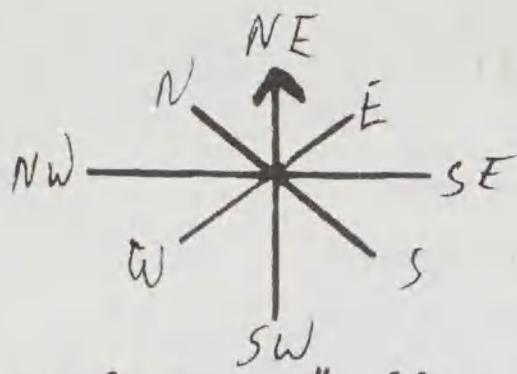
DATE 11 Sept 1964  
Pg. # 5



time <sup>265</sup> species <sup>SW</sup> # dir. hgt. remarks loc.

1420	Sooty Shear	2	SSE	Low	
1428	"	2	SSE	Low	
1429	D-r Petrel	1	SW	Low	
1431	Sooty Shear	3	SSE	Low	
1433	"	1	SSE	Low	
1435	"	2	SSE	Low	
1435	"	1	SSE	Low	
1437	"	1	SSE	Low	
1437	"	1	SSE	Low	
1441	"	1	SSE	Low	
1444	"	1	SSE	Low	
1444	"	1	SSE	Low	
1447	"	1	SSE	Low	
1448	"	1	SSE	Low	
1456	"	2	SSE	Low	
1500	"	1	SSE	Low	
1504	"	1	SSE	Low	
1518	"	1	SSE	Low	
1520	"	2	SSE	Low	
1521	"	1	SSE	Low	
1528	"	1	SSE	Low	
1529	"	1	SSE	Low	
1532	Pterodroma	1	NNW	Low	
1537	Sooty Shear	1	SSE	Low	
1539	Sooty Shear	1	SSE	Low	
1543	"	1	SSE	Low	
1552	D-r Petrel	1	SSE	Low	
1557	Sooty Shear	1	SSE	Low	
1558	"	1	SSE	Low	
1558	D-r Petrel	1	SE	Low	
1605	Sooty Shear	2	SSE		
1610	"	1	S		
1617	"	2	S		
1639	"	1	SSE		
1641	"	2	S		
1649	Bonin Petrel	1	S	Low	
1705	Sooty Shear	1	SE	Low	
1709	Sooty Tern	1	SE	Low	
1709	Sooty Shear	1	SE	Low	
1711	"	3	SE	Low	
1713	"	1	SE	Low	





DATE 11 Sept 1964  
Pg. # 6

	time	species	#	dir.	hgt.	remarks	loc.
1-1	1816	New Z Shear	1	SE	Low	Excellent view - close to ship. Gray back with very prominent black M on wing. White underneath. Flew close to the gliding flight not at all like Pterodroma. Shaped more like Wedgetail. P.W.	
16-20	1817	Sooty Shear	2	SE	Low		
	1718	"	1	SE	Low		
1-1	1718	Bulwer's	1	NW	low		
3-3	1719	Wedgetail	1	S	Low		
	1728	Sooty Shear	1	SE	Low		
	1728	"	1	SSE			
	1733	"	2	S			
	1736	Wedgetail	1	SW	low		
3-4	1736	Pterodroma	1	NW	"		
	1737	Sooty Shear	2	S	"		
	1739	"	1	S			
	1741	"	1	S			
1-3	1745	Terns?	3	SSE	30'-low		
	1747	Pterodroma	2	N	low		
	1749	"	1	NW	low		
	1749	Sooty Shear	2	SE			
1-1	1750	Bonin Pet	1	NW	low		
	1752	Sooty Shear	1	S	low		
	1755	"	5	S	"		
	1800	"	1	SSE	"		
	1806	"	2	S	"		
	1815	WEDGETAIL	1	S	"		
41	1821	SOOTY SHEAR	1	S	"		
	1823	"	3	"	"		
	1825	"	2	"	"		
	1835					SUNSET	
Ca.	1847	"	1	"	"		
	1932	BIRD	1	SW	"		
	2300					Changed course to a heading of NW	



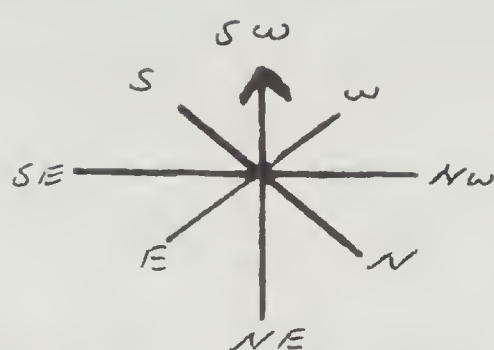


DATE 12 Sept 64  
Pg. # 1

F-1-43  
FF-0-0

	time	species	#	dir.	hgt.	remarks	loc.
	0212	Bird	1	NW	50'		
	0245	Bird	1	S	20'		
	0305	Shear-Pet	1	W	low	- change course to SW	
	0320	Fairy tern	1	SW	70'		
	0409	"	1	NE	50'		
	0458	"	1	NE	15'		
	0510	Sooty tern	1	SE	40'		
	0551	Shear-Pet	1	ESE	low		
	0603	- - -	-	-	-	- slow for BT & water sampling	
	0606	Wedgetail	1	NW	low		
CR	0615	- - -	-	-	-	SUNRISE - VERY HEAVY CLOUDS + NUMEROUS RAIN SQUALLS IN AREA	
	0625	- - -	-	-	-	STOPPED FOR OCEANOGRAPHIC SAMPLING.	
	0720	- - -	-	-	-	UNDERWAY	
2-2	0721	RUDDY TURNSTONE	1	W	70-40'	- CALLING	
4-1	0723	R.-T. TROPIC	1	-	80'	Collected - P.W.W.	
13-0	0724	WEDGETAIL	2	W	low	Circling downed TROPICBIRD	
4-1	0740	SHEAR-PET.	1	S	"	DISTANT	
3-3	0741	RUDDY TURNSTONE	1	SW	"	Collected - P.W.W.	
	0810	Pterodroma	1	NNW	"		
	0813	Wedgetail	1	NW	"		
	0816	"	4	W	"		
	0820	Pterodroma	1	SE	"		
F	0825	Wedgetail	40-25			Very spread out; no feeding	
4-1		Booby	1			Collected - R.W.M. + R.A.	
1-2		Sooty Tern	2				
4-1	0826	Sooty Shear	1	SE	to 20'		
	0832	Pterodroma	1	E	low		
	0850	Wedgetail	1			Collected - R.W. Merrill - part of flock of 0825	
1-1	0855	W.T. Tropic	1	E	50'		
11-2-1	0915	Wedgetail	4	W	low	1 collected - R.W.M.	
	0924	Wedgetail	1	S	"		
	0925	Wedgetail	1	S	"		
	0925	"	1	S	"		
	0925	"	1	S	"		
	0941	"	1	SE-N	"		
	0955	"	2	SW	"		
	1015	Sooty Shear	3	S	low		
1-1	1017	(Bonin Is) Pet	1	NNW	low		
	1025	Sooty Shear	4	SE	low		
	1036	Wedgetail	1	N	low		
	1040	Sooty Shear	1	S	low		

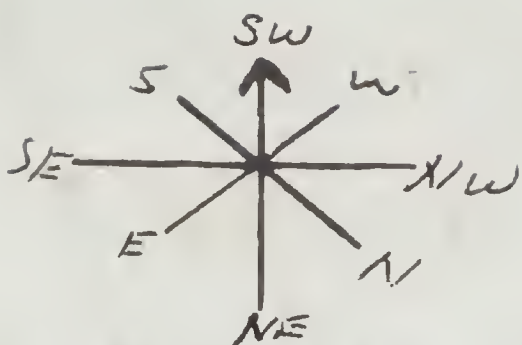




DATE 12 Sept. 1964  
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
✓	10 43	Sooty Shear.	2	VS	Low		
✓	10 48	Bonin Is. Pet.	1	S	"		
✓	10 50	Wedgetail Sh.	1	N	"		
	10 50	"	1	S	"		
	10 53	Bonin Is. Pet.	1	S	Low		
✓	11 00	Shear-Pet.	1	N	Low		
F	11 04	Sooty Shear	7	VS	Low	not feeding	
	11 07	Sooty Shear	1	VS	Low		
	11 12	Wedgetail	1	NNE	Low		
✓	11 20	Red T. Tropic	1	SSW	70'		
✓	11 23	Pterodroma	1	S	Low		
	11 23	"	1	N	Low		
	11 23	Sooty Shear	24	VS	Low		
	11 26	Pterodroma	1	S	"		
	11 32	Shear-Pet	1	N	Low		
	11 35	Sooty Shear	1	VS	Low		
4 F	11 45	Sooty Tern	11	NE	30'	not feeding	
F	<del>11 45</del>	<del>Sooty Shear</del>	<del>7</del>	<del>S</del>	<del>Low</del>		
F	11 55	Sooty Shear	7	S	Low	not feeding	
✓	12 04	Bulwer's Pet	1	NNW	Low		
F	12 15	Sooty Tern	175 ± 25			Flock split & went SE & NW	
		Wedgetail Sh.	75 ± 10			Sooty Terns were low to 80-100'	
		Pterodroma	10			Wedgetails all low and feeding - some were sitting on the water.	
		Pterodroma	1			A number of Pterodroma were seen - one was collected. Flying Fish underneath.	
✓	12 55	Ruddy Turnstone	1	N	Low	- stayed with the ship for 3 circles	
	13 00	Pterodroma	1	NE	Low	- Identical to the one collected at 12 15.	
	13 48	Sooty Tern (imm)	2	NE	60'	cheeped	
	13 55	Shear-Pet	1	S	Low		
	14 08	Sooty Tern	5	NE	0-60'		
✓	14 08	Fairy Tern	1	NE	Low		
	14 08	Pterodroma	1	E	Low	probably white necked Pet.	
	14 13	Wedgetail Sh.	1	N	Low		
	14 37	Sooty Shear	23	SW	Low	if it's a flock its pretty broken up	
	14 37	Wedgetail Sh.	1	NW	Low		

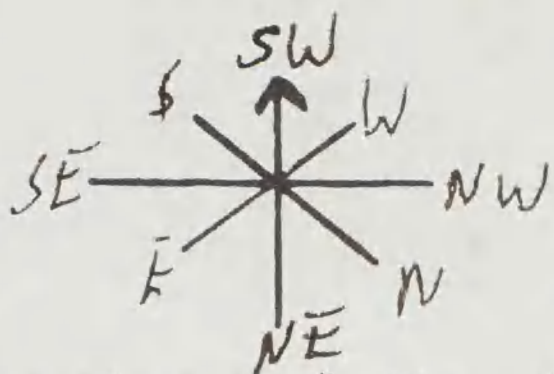




DATE 12 Sept - 1964  
Pg. # 3

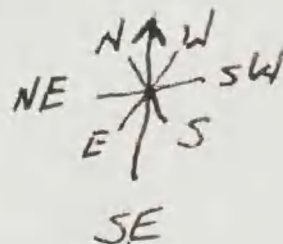
	time	species	#	dir.	hgt.	remarks	loc.
F	1440	Sooty Shearwater	25-30	SW	Low	traveling fast probably not feeding	
	1445	Bulwer's Pet.	1	S	Low		
	1500	Pterodroma	1	S	Low		
	1500	Sooty-Shear	1	S	Low		
	1510	" "	1	S	"		
	1522	Bulwer's	1	S	"		
	1525	W.N. Petrel	1	SE	"		
	1528	Sooty Shear	1	S	"		
	1534	" "	7	S	"		
	1540	Wedgetail	1	NW	"		
	1542	Sooty Shear	18 ± 3	S	"		
	1600	"	1	S	Low.		
F	1608	"	22	SSE	Low	not Feeding.	
	<del>1608</del>	<del>"</del>	<del>1</del>	<del>SSE</del>	<del>Low</del>		
	<del>1608</del>	<del>"</del>	<del>1</del>	<del>SSE</del>	<del>Low</del>		
F	1612	Sooty Tern	21	NNE	50'	not feeding	
	1612	Sooty Shear	1	SSE	Low		
	1619	Shear-Pet	1	SSE	Low	New Zealand Shearwater? easy gliding flight gray back white underneath however very poor sight. P.W.	
	1627	Sooty Shear	1	SSE	Low		
	1629	"	1	SSE	Low		
	1630	Wedgetail	1	NNW	Low		
	1653	Sooty Shear	1	SSE	Low		
F	1655	"	7	SSE	Low		
F	1656	"	10	"	"		
	1656	Sooty tern	1	SSW	60'		
	1659	R-T Tropic	1	SE	60'		
	1706	Wedgetail	3	NW	Low		
	1707	"	2	SSE	"		
F	1708	Sooty shear	10	"	"		
	1710	Wedgetail	2	"	"		
	1712	Shear Pet	1	SSE	"		
F	1728	Sooty Tern	6	Dr	Low	immature appeared to be feeding	
		Wedgetail	2	Dr	Low		
	1730	Sooty Sh	1	SSE	Low		
	1740	"	2	SSE	Low		
	1740	Sooty Tern	2	NE	Low		
	1740	Wedgetail	1	NE	Low		



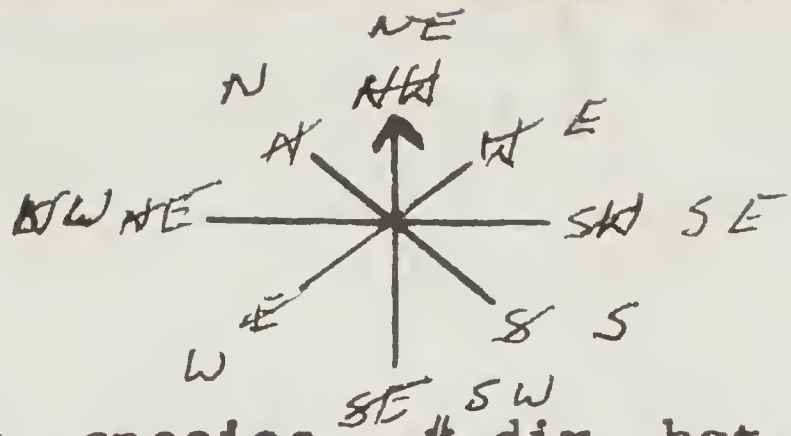


DATE 12 Sept 1964  
Pg. # 4

	time	species	#	dir.	hgt.	remarks	loc.
6-6	1745	Sooty Shear	1	SSE	Low		
	1747	"	1	SSE	Low		
	1751	"	1	SSE	Low		
✓	1755	Com. Noddy	1	NNW	50'		
	1756	Sooty Shear	1	SSE	Low		
3-8	1757	Wedge Tail	1	S	Low		
✓	1759	P. Tero Drone	1	SE	Low		
	1800	Wedgetail	1	SE	"		
✓	1804	Sooty tern	3	"	"		
	1813	Wedgetail	1	SSE	"		
+	1824	Bulwer's	1	SSE	"	} appeared together; Bulwers landed on water, Bonin circled it for ~ 30 sec, then both flew off SSE, the Bonin 1/3 again as fast.	
+	1824	Bonin Is.	1	"	"		
	1824	Sooty shear	1	"	"		
	1833	"	1	"	"		
1836	1841	Sooty tern	2	"	"	SUNSET	
	1936	shear Pet	1	NE	"		
	2057	"	1	☉	"		
	2145	Bind	1	NE	60'		
	2300					Change course to NW	
	2435	<del>REPTER BIRD</del>	1				



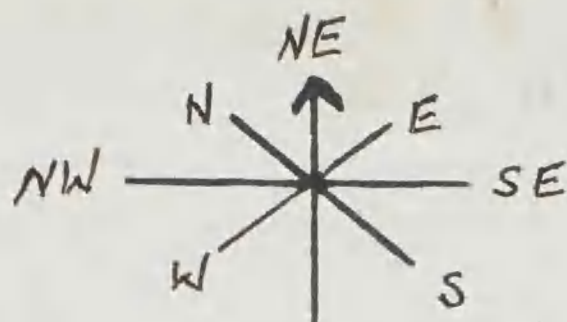




DATE 13 SEPT 64  
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0035	TROPICBIRD	1	N	50'		
	0045	SHEAR-PET.	1	NW	30'		
	0120	BIRD	1	SW	LOW	FLEW DIRECTLY INTO SIDE OF SHIP BUT COULD NOT FIND ABOARD!	
	0157	WEDGETAIL	1	NE	LOW	NEAR SIZE OF BOOBY, DARK ABOVE, FAIRLY RAPID WING BEATS. IMM BOOBY?	
	0158	TROPICBIRD	1	SW	80'	FLEW AT LIGHT AS BIRD ABOVE. BIRD ABOVE NOW THOUGHT TO BE WT!	
	0220	SMALL PTERODROMA	1	SW	LOW		
ca	0400	---	---	---	---	- AS LOW OVER H <sub>2</sub> O AS USUALLY SEEN DIURNALLY.	
	0400	BIRD	1	SW	High	course change to NE	
	0404	BIRD	1	NW	LOW	About 30' above ship radar	
	0510	Wedgetail sh	1	SE	LOW	Probably a Wedgetail	
	0615	Sooty Shear	1	SE	"		
	0620	"	3	SE	"		
	0621	"	1	SE	"		
	0622	"	1	SE	"		
	0624	---	---	---	---	SUNRISE	
2-8	0625	Sooty Shear	5	SE	"		
2-2	0625	R.T. Tropic	1	NW	40'		
	0625	---	---	---	---	Morning Station	
6-9	0640	Wedgetail	2	S	low	circled near ship for 7 mins. together	
5-7	0655	Sooty Tern	1	SE	20'		
	0658	"	1	S	low		
	0701	Wedgetail	1	SE	low		
	0705	R.T. Tropic	1	SE	50'	Collected KA; probably same as 0625	
	0712	"	1	SE	50'	"	
	0718	Wedgetail	3	S	low		
	0725	---	---	---	---	UNDERWAY	
	0744	Wedgetail	1	SE	low		
	0749	"	1	S	"		
	0754	Sooty Tern	1	SSW	30'		
	0800	Sooty Shear	1	S	low		
1-2	0807	PTERODROMA	2	SW	LOW		
	0807	WEDGETAIL	1	NW	"		
	0808	SOOTY SHEAR	2	SE	"		
	0810	SOOTY TERN	1	NW	20'		
2-2	0833	BONIN TYPE	1	SW	LOW		
1-1	0835	W.-N. Petrel	1	SE	"		
	0840	SOOTY TERN	3	S	"	1-1mm.	
	0840	BONIN TYPE	1	SW	"		





DATE 13 SEPT 64  
Pg. # 2

	time	species	SW #	dir.	hgt.	remarks	loc.
✓	0845	PTERODROMA	1	NE	LOW		
20-38	0846	SOOTY SHEAR	1	SE	"		
F	0850	" "	8	SE	"	F-1-8	
	0851	" "	2	"	"	FF-0-0	
	0855	" "	2	"	"		
	0857	" "	1	"	"		
	0859	" "	1	"	"		
	0902	" "	4	"	"		
	0909	" "	1	"	"		
5-5	0913	WEDGETAIL	1	W	"		
	0915	"	1	SW	"		
	0917	SOOTY SHEAR	1	S-SE	"		
✓	0921	SHEAR. PET.	1	"	"		
2-2	0928	FAIRY TERN	1	NE	30'		
✓	0929	BONIN TYPE	1	NW	LOW		
	0930	SOOTY SHEAR	1	SSE	"		
5-6	0932	SOOTY TERN	1	SW	"		
	0934	" "	1	SE	"		
	0936	" "	1	"	"		
	0945	FAIRY TERN	1	NE	"		
	0949	SOOTY SHEAR	1	S-SE	"		
	1000	" "	2	"	"		
✓	1019	Red-Tail Tropic	1	SE	100'		
	1030	Wedgetail Sh.	1	S	Low		
	1032	Sooty Shear.	1	S	Low		
	1043	Wedgetail Sh.	1	SW	Low		
	1055	" "	1	S-SW	Low		
	1059	Sooty TERN	2	NE	Low		
✓	1110	DARK RUMPT. P.	1	N	Low		
	1125	Sooty Shear.	1	N	Low	Sitting on water	
	1130	" "	2	SE	Low		
	1151	" "	5	S	Low	Got off water	
	1201	" "	1	S	Low		
	1215	" "	1	SE	"		
✓	1220	Bulwer's	1	SW	"		
	1223	Sooty shear	1	S	"		
	1236	" "	1	SSE	"		
57	1238	Sooty tern	1	N	15'		



7<sup>0</sup>  
43

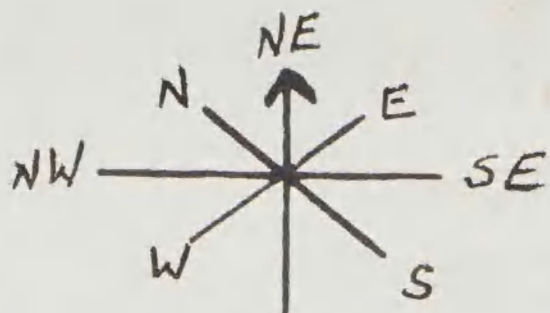




DATE 13 Sept 64  
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
24-41	1245	Sooty shear	5	SSE	low		
	1247	"	2	"	"		
	1250	"	1	"	"		
4-4	1252	Wedgetail	1	"	"		
3-7	1255	Sooty tern	2	SE	"		
	1256	Sooty shear	1	SSE	"		
1-7	1257	Shear-Pet	1	"	"		
	1301	Sooty Shear	1	"	"		
	1306	"	3	"	"		
	1308	"	1	"	"		
	1327	"	1	"	"		
	1335	"	1	"	"		
	1337	"	1	"	"		
1-7	1345	Bonin Is	1	SW	"		
23	1355	Wedgetail	1	SE	"		
	1427	SOOTY SHEAR	1	S-SE	"		
	1428	" "	2	"	"		
	1444	" "	1	"	"		
4-7	1520	D.-r. Petrel	1	SE	"		
	1525	SOOTY SHEAR	1	S-SE	"		
	1545	" "	1	"	"		
4-7	1551	Bulwer's	1	NW	"		
	1553	SOOTY SHEAR	1	S-SE	"		
	1554	" "	2	⊙	"		
	1556	SOOTY TERN	4	SE	"		
	1607	Sooty Shear	1	SE	"		
	1610	Wedgetail	1	SE	"		
	1614	Sooty Shear	1	S	"		
	1615	" "	2	SW	"		
	1620	" "	6	S	"		
	1626	" "	1	S	"		
	1628	Wedgetail(?)	1	SSW	"		
	1633	Sooty Tern	1	S	"		
1-7	1654	R.T. Tropic	1	SE	?	Got up off water	
	1655	Sooty Shear	1	S	low		
	1703	" "	1	SE	"		
	1709	" "	1	"	"		
	1713	" "	1	S-SE	"		



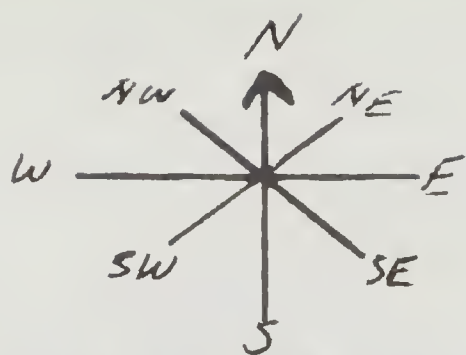


DATE 13 SEPT 64  
Pg. # 4

time	species	#	dir.	hgt.	remarks	loc.
1725	SOOTY SHEAR	3	S-SE	Low		
1725	"	1	"	"		
1725	"	1	"	"		
1725	"	3	"	"		
1725	WEDGETAIL	1	SW	"		
1728	SOOTY SHEAR	4	S-SE	"		
1729	"	1	"	"		
1730	"	1	"	"		
1736	"	1	"	"		
1739	"	1	"	"		
1739	"	1	"	"		
1739	BULWERS	1	NW	"		
1742	SOOTY SHEAR	2	S-SE	"		
1745	"	1	"	"		
1747	"	1	"	"		
1747	"	1	"	"		
1747	"	3	"	"		
1750	"	1	"	"		
1750	"	1	"	"		
1755	"	1	"	"		
1800	"	1	"	"		
1806	"	1	S-SE	Low		
1807	"	1	"	"		
1810	"	1	"	"		
1813	"	1	"	"		
1819	"	1	"	"		
1827	"	1	"	"		
1834					Sunset	
2000	Shear-Pet	1	NE	Low		
2007	Bird	1	SE	70'	probably Frigatebird	
2315	Bird	1	NW	low	probably Shear-Pet	

184  
71  
113

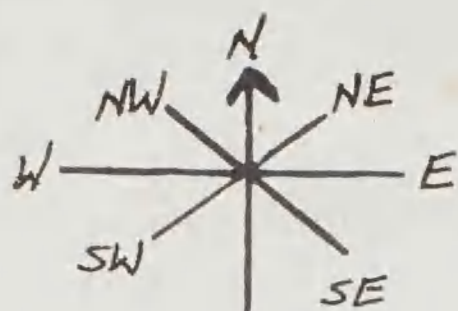




DATE 14 Sept 1964  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0158	BIRD	1	NE	Low	probably Wedgetail sh.	
0200					COURSE CHANGED to a heading of N <u>LEAVE GRID</u>	
0230	BIRD	1	N	Low		
0235	Wedgetail sh.	5	N	Low	2 came along port side AND were calling to each other. Then another joined. They all looked over the ship. Then 2 more came past. One of the last 2 changed direction when it was directly opp. the port life boat and came to the ship. It crashed into the life boat. When I got down to pick it up it was running around the deck. I brought it to the flying bridge and looked at it then released it. - light phase - no broad patch. was no broken bones or anything. No band.	fleet went through
0245	Tropic bird	1-2			there's one or two about because I've been hearing them call for the past 2-3 min.	
0247	Wedgetail sh	1	N	Low		
0249	BIRD	1	NE	40'	Came right for the ship about 5' or 10' above the flying bridge. About the same size as a Wedgetail and very similar in all respects. light underneath with grey edges of wings tail and sides of neck. Wing beats were rather like a tropic bird. Came in at this height - did not come up from the surface. The light wing flashed just before it hit the radar mast and it swerved and went west as it had come. That is the reason I could tell the grey border and size. It made no noise.	
0255	Wedgetail sh	1	E	Low	Came in about 2 feet off water heading straight for ship. Saw side of ship about 10 feet port side of bridge and swerved but appeared that it couldn't get around it and dropped into the sea about 5 feet to port and paddled away from ship.	
0325	TROPIC BIRD	1	E	70'	CALLING & FOLLOWING.	
0336	"	1	E	"		
0400	FAIRY TERN	1	N	"	- SPREAD TAIL & called near flying BRIDGE	
0410	WEDGETAIL	1	N	TO 60'		
0415	TROPIC BIRD	1	E	TO 40'		

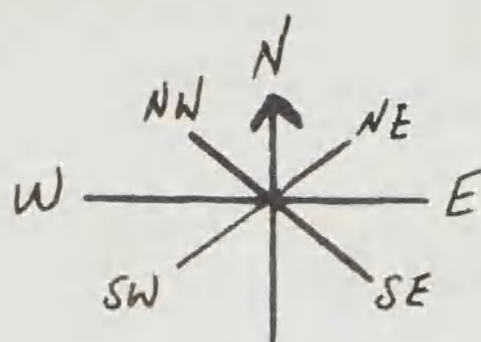




DATE 14 SEPT 64  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
0315	shear-pet	1	S	low	seen by AAA of watch	
0430	TROPICBIRD OR P. TERN	1	NE	20'		
0435	SOOTY TERN	1	N	30'	- FOLLOWING	
0515	TERN	1	N	100'		
"	"	1	"	"		
0530	R.-T. TROPIC	1	E	LOW	- FLEW INTO SHIP, BOUNCED OFF INTO BOW-WAVE,	
0540	BIRD	1	S	"	ROSE OVER FANTAIL, DEPARTED AFT.	
0542	SOOTY TERN	1	-	-		
0600	WEDGETAIL	1	S	LOW	CALLING.	
0605	"	1	S	"		
0618	"	1	E	"		
0620	"	3	G	"		
0622	Bonin Is.	1	S	"		
SUNRISE 8:17 0623	Sooty shear	2	SE	"	- Stop for morning station.	
0627	"	1	"	"		
12:17 0630	Wedgetail	5	ESE	LOW		
0630	"	1	SSE	Low		
2:2 0630	Pterodroma	1	SSE	LOW		
0631	"	1	"	"		
0631	Wedgetail	1	SE	"		
0632	Sooty shear	1	SSE	"		
0633	"	1	"	"		
0651	Wedgetail	1	SE	"		
0655	"	1	SE	"		
0702	"	1	"	"		
0705	- - -	-	-	-	- - regain momentum as before, overcoming inertia.	
0709	Wedgetail	1	"	"		
0715	Sooty shear	1	SSE	"		
0716	"	1	"	"		
0718	Wedgetail	2	SE	"		
1:2 0719	Sooty tern	2	SSE	10'		
0721	Sooty shear	1	"	LOW		
0723	Wedgetail	1	SE	"		
0725	Sooty shear	1	SSE	"		
0735	Wedgetail	1	"	"		
0738	"	1	SE	"		
0738	"	1	"	"		

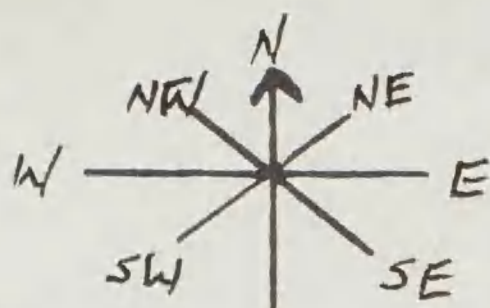




DATE 14 Sept 64  
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
11-15	0744	Sooty shear	1	SSE	low		
	0752	"	1	"	"		
12-12	0753	Wedgetail	1	N	"		
	0756	"	1	S	"		
	0756	"	1	"	"		
	0759	Sooty shear	1	SSE	"		
12-1	0808	Dark Rump	1	S	"		
12-1	0821	Shear-Pet	1	WNW	"		
	0836	Sooty Shear	1	S	"		
	0836	Wedgetail	1	S	"		
	0842	Sooty Shear	1	ESE	"		
	0846	Wedgetail	1	NNE	"		
	0855	Sooty Shear	2	SE	"		
	0859	Wedgetail	1	E	"		
	0909	"	1	E	"		
2-3	0915	Bonin Is.	2	SW	"		
	0919	Wedgetail	1	SE	"		
	0920	Sooty Shear	1	S	"		
	0920	Bonin Is.	1	S	"		
	0920	Sooty Shear	1	S	"		
12-1	0929	Bulwers	1	NW	"		
	0929	Wedgetail	1	S	"		
	0935	Sooty Shear	4	SE	"		
12-1	0937	Christmas Is	1	-	420		
	0937	Wedgetail	1	N	low	Orange tag	
2-2	0937	W.N. Petrel	1	N	low		
2-2	0951	Pterodroma	1	S	"		
	0955	"	1	N	"	Wh Nor D-R	
12-1	0955	R.T. Tropic	1	W	to 80'	got up off H <sub>2</sub> O? May have been 2 birds	
	1005	WEDGETAIL	1	SE	LOW		
	1010	"	1	CR	"		
	1013	SOOTY SHEAR	1	S	"		
	1016	W.-N. PETREL	1	N	"		
	1018	SOOTY SHEAR	1	S	"		
12-2	1025	SOOTY TERN	2	SE	"		



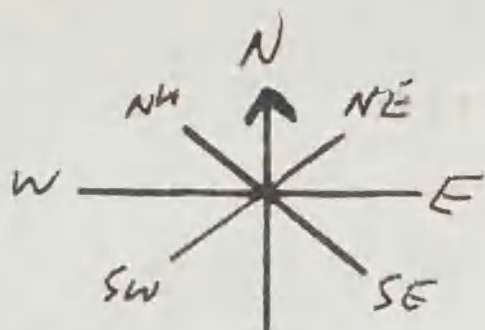


DATE 14 SEPT 64  
Pg. # 4

	time	species	#	dir.	hgt.	remarks	loc.
6-13	1043	SOOTY SHEAR	1	S	LOW		
	1051	" "	5	S-SE	"		
	1111	" "	3	"	"		
	1114	" "	2	"	"		
1-1	1115	W-N. Petrel	1	NW	"		
13-28	1116	WEDGETAIL	2	<del>SE</del>	"		
	1130	"	1	S	"		
	1137	"	2	<del>SE</del>	"		
	1146	"	1	E	"		
	1154	SOOTY SHEAR	1	S	"		
9-31	1156	SOOTY TERN	1	NE	"		
	1157	" "	2	N	"	1-imm	
	1158	" "	3	E	"		
	1159	" "	1	E	"		
	1200	WEDGETAIL	1	N	"		
	1207	"	1	S	"		
HT	1228	Shear-Pet	1	S	"	distant	
	1230	Sooty Tern	2	SE	"		
	1232	Wedgetail	6	2	"	at least 3 on water	
	1235	"	8	2	"	most on water; joined above	
LT	1305	W.T. Tropic	1	N	50'	collected - PWL	
6-6	1315	Bulwers	1	S	low		
F	1320	Sooty Tern	14	ENE	low	Moving toward flock on horizon	
		Wedgetail	3			Not feeding (flock)	
1-8 F	1320	Tern	~50			on horizon	
	1336	Sooty Tern	4	N?	to 20'	} together X No! (flock)	
	1336	Wedgetail	1	N?	low		
	1348	"	1	NNE	"		
	1405	BULWERS	1	NNE	"		
	1409	"	1	"	"	joined 1405	
LT	1420	R-T Tropic	1	"	60'		
	1433	Sooty tern	2	E	20'		
	1438	Bulweri	1	WNW	low		
	1439	Sooty tern	2	"	"		
	1447	Bulweri	1	"	"		
	1454	Wedgetail	1	N	"		
	1514	Bulwers	1	WNW	"		
	1515	Sooty Shear	2	SSE	"		

F-2-67  
FF-0-0



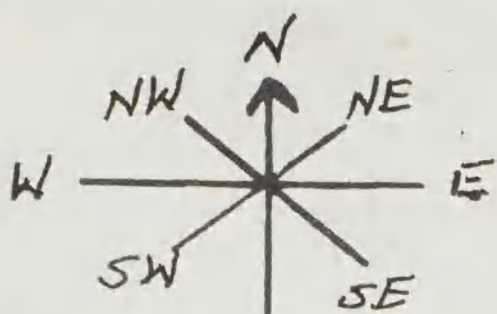


DATE 14 Sept 64  
Pg. # 5

	time	species	#	dir.	hgt.	remarks	loc.
4-90	1532	Sooty shear	14	SSE	low		
4-4	1534	Wedgetail	1	NW	"		
5-6	1542	Bonin Is.	1	S	"		
F	1544	Sooty shear	16	SSE	"		
	1549	Wedgetail	1	"	"		
5-5	1551	Bulwer's	1	S	"		
	1612	Bonin Is.	2	N	Low		
	1614	Sooty Shear	1	SSE	Low		
	1622	"	1	SSE	Low		
	1630	Bonin Is.	1	W	Low		
F	1640	Sooty Shear	18	SSE	Low	not feeding	
	1641	Wedgetail	1	E	Low		
	1646	Bulwer's	1	N	Low		
F	1700	Sooty Shear	15	SSE	Low		
	<del>1700 Sooty Shear</del>						
✓	1700	Sooty Tern	1	ESE	40'		
F	1703	Sooty shear	14	SSE	Low		
	1711	"	3	"	"		
	1713	"	1	"	"		
✓	1719	Pterodroma	1	N	Low		
F	1722	Sooty Shear	5	SSE	Low		
	1722	"	1	SSE	Low		
	1724	Bonin Is.	1	S	Low		
	1730	Bonin Is.	1	SSE	Low		
✓	1731	W-T Tropic	1	N	60'	adult	
	1731	Bulwer's	1	N	Low		
	1732	Bulwer's	1	N	Low		
	1829	Bulwer's	1	N	Low		
1-1	1830	R-T Tropic	1	N	70'		
	1834	Wedgetail	1	N	Low	Sunset.	
	1835						

F-6-82  
FF-0-0





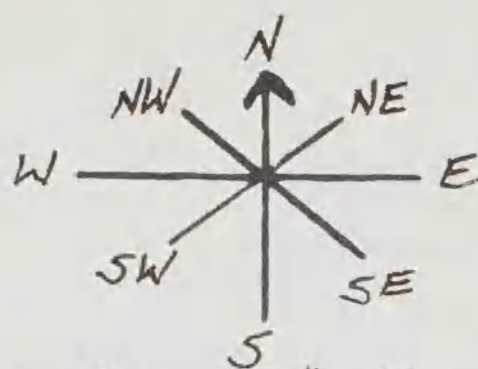
DATE 15 SEPT 64

Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
CA	0610	---	---	---	---	SUNRISE	
<del>12-6</del>	0615	SOOTY SHEAR	2	S-SE	LOW		
<del>29-41</del>	0620	WEDGETAIL	1	"	"		
	0623	"	3	N	"		
	0630	"	2	NE	"		
	0630	"	1	N	"		
	0632	"	2	"	"		
F	0634	SOOTY SHEAR	5	S	"		
F	0635	" "	7	"	"		
	0636	" "	2	"	"		
	0646	" "	3	"	"		
<del>1-1</del>	0646	SHEAR-PET.	1	"	"		
	0646	WEDGETAIL	1	"	"		
	0654	"	1	S	"		
	0656	SOOTY SHEAR	3	"	"		
	0658	WEDGETAIL	1	"	"		
	0700	"	2	E	"		
F	0703	SOOTY SHEAR	8	S	"		
	0705	Wedgetail	1	"	"		
	0705	"	2	"	"		
	0706	"	1	"	"		
	0706	"	1	"	"		
	0707	"	2	"	"		
	0708	"	1	"	"		
	0713	"	1	"	"		
	0714	"	1	"	"		
	0714	"	1	"	"		
	0715	"	1	"	"		
	0718	"	3	"	"		
<del>3-5</del>	0721	SOOTY TERN	1	S	"		
	0722	WEDGETAIL	2	SE	"		
	0722	"	1	S	"		
	0725	"	3	"	"		
	0725	"	1	"	"		
F	0725	SOOTY SHEAR	15	S	"		
	0735	" "	3	"	"		
	0735	WEDGETAIL	2	"	"		
	0736	"	1	"	"		
	0738	"	1	"	"		
	0745	SOOTY TERN	2	"	"		
	0747	WEDGETAIL	1	S	"		
	0752	"	2	"	"		
	0752	SOOTY SHEAR	4	S	"		
	0752	SOOTY TERN	1	"	"		
F	0754	SOOTY SHEAR	8	"	"		
	0756	" "	3	"	"		

F-5-43  
FF-0-0





DATE 15 SEPT 64  
Pg. # 2

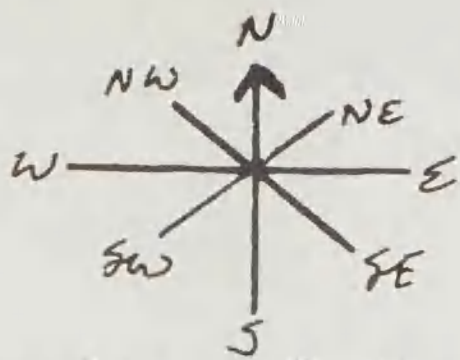
	time	species	#	dir.	hgt.	remarks	loc.
<del>15-16</del>	0800	SOOTY SHEAR	425	S-SW	LOW		
F	0800	" "	18	"	"		
<del>5-8</del>	0805	Sooty Tern	1	SW	"		
<del>12-15</del>	0805	Wedgetail	1	SW	"		
	0805	Sooty Tern	1	S	"		
<del>4-4</del>	0807	Bulwer's	1	E	Low		
	0812	Wedgetail	1	SW	"		
F	0812	Sooty Shear	5	SE	"		
	0820	Wedgetail	1	SSW	"		
F	0820	Sooty Shear	10	SW	"		
	0824	"	3	SE	Low		
	0824	Wedgetail	1	SW	Low		
F	0839	Sooty Shear	17	SSW	"		
	0841	Bulwers	1	NNW	"		
	0845	Bulwer's	1	N	Low		
	0847	Wedgetail	1	SW	Low		
	0850	"	1	SW	"		
	0850	"	1	SW	"		
	0854	"	1	S	"		
	0859	"	1	SW	"		
	0859	"	1	SE	"		
<del>1-1</del>	0901	Bonin Is.	1	N	"		
	0903	Wedgetail	1	SSW	"		
	0906	Bulwers	1	SE	"		
F	0918	Sooty Shear	70±5	SE	"		
F	0922	" "	60±5	SSW	"		
F	0925	" "	18±2	SW	"		
F	0932	" "	60±5	SE	"		
F	0933	Sooty Tern	75±5	N	all heights	Perhaps feeding - distant	
F	0935	Sooty Shear	50±5	SE	low		
F	0935	Sooty Tern	10±1	⊙	low	Not feeding	
		Wedgetail	4-5	⊙			
F	0939	Sooty Shear	33±2	S	low		
F	0945	" "	25	SE	"		
F	0945	" "	6	SE	"		
	0947	Sooty Tern	2	N	"		
F	0950	Sooty Shear	45±5	SE	"		

F-16-546  
FF-0-0

43  
201  
70  
160

150  
209  
205  
160



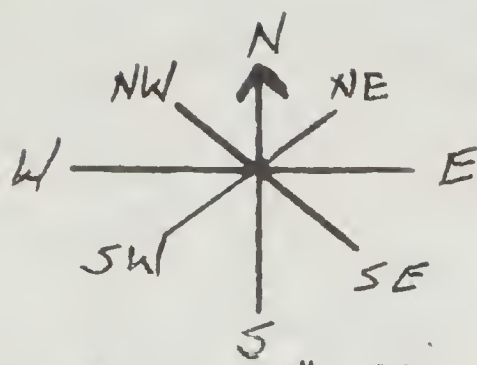


DATE 15 Sept 64  
Pg. #3

	time	species	#	dir.	hgt.	remarks	loc.
6-130	0953	Sooty Shear	1	SW	low		
F	0956	" "	45 ± 2	SW	"		
17-234	1002	WEDGETAIL	1	N	"		
3-4	1006	BONIN Is	1	N	"		
9-477	1007	SOOTY TERN	100 ± 10			25 ± 5 imm	
		WEDGETAIL	75 ± 5		TO 60'	Not Feeding	
	1016						
	1021	WEDGETAIL	5	N	LOW	SCATTERED	
	1026	"	2	NW	"		
F	1030	SOOTY TERN	200 ± 20			40 ± 10 imm	
1-2		FRIGATE	2	E	TO 200'		
		WEDGETAIL	75 ± 10			SOME SITTING ON H <sub>2</sub> O - NOTHING SEEN TO FEED.	
	1037	SOOTY SHEAR	23 ± 3	S	LOW		
	1040	WEDGETAIL	3	N	"		
F	1045	SOOTY TERN	60 ± 10	E	TO 150'	Not Feeding	
		WEDGETAIL	20 ± 5				
	1050	SOOTY TERN	5	SE	LOW		
	1051	WEDGETAIL	2	N	"		
F	1052	SOOTY SHEAR	24	S	"		
	1054	SOOTY TERN	2	N	40'		
	1054	WEDGETAIL	2	N	LOW		
	1054	BONIN Is	2	N	LOW		
F	1100	SOOTY TERN	60 ± 8	E	TO 200'	Not Feeding	
	1104	WEDGETAIL	1	N	LOW		
F	1110	SOOTY TERN	45 ± 5	E			
		WEDGETAIL	45 ± 5		TO 80'	15 Wedgetails sitting on water in group.	
	1115	WEDGETAIL	3	N	LOW	- NEAR RAIN SQUALL	
1-2	1115	Pterodroma	2	N	"		
1-1	1117	W-N. Petrel	1	SE	LOW		
	1118	SOOTY SHEAR	30 ± 5	S	LOW		
	1124	SOOTY TERN	2	S	"		
	1125	" "	3	SE	"		
F	1126	SOOTY SHEAR	7	S	"		
	1133	BONIN Is.	1	N	"		
2-3	1136	Bulwer's	1	S	"		
	1138	"	1	E	"		
	1140	"	1	N	"		
1-1	1140	X-MAS Is.	1	S	"		

F - 8 - 758  
FF - 0 - 0





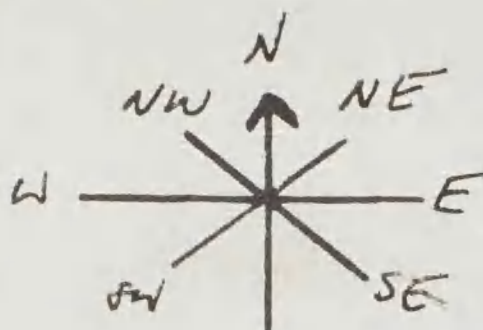
DATE 15 SEPT 64  
Pg. # 4

	time	species	#	dir.	hgt.	remarks	loc.
2-8	F 1140	SOOTY SHEAR	60±10	S	Low		
	F 1144	" "	90±15	S	"		
	F 1146	" "	80±10	S	"		
	F 1147	" "	8	S	"		
	F 1154	" "	18	S	"		
2-38	1157	WEDGETAIL	1	S	"		
	F 1158	SOOTY SHEAR	60±5	S	"		
	F 1200	" "	45±5	S	"		
2-3	1201	BONIN Is	1	N	"		
	1202	"	2	S	"		
	F 1208	SOOTY Shear	50	S	Low		
2-21	1209	SOOTY Tern	1	SE	10'		
	F 1210	SOOTY Shear	65±5	S	Low		
	F 1214	SOOTY Tern	90±10		Low	not feeding	
5-6	1215	Bulwer's	1	S	Low		
2-2	1217	W-n Petrel	1	N	Low		
	F 1228	SOOTY Tern	65±5	E	60'	NOT Feeding	
		Wedgetail	25±5	E	Low		
	F 1230	SOOTY Shear	40	S	Low		
	1234	Wedgetail	3	S	Low		
	1242	SOOTY Tern	1	SE	Low		
	1242	Wedgetail	1	SE	Low		
	1243	Bulwer's P	1	N	Low		
	1250	SOOTY Tern	1	S	20'		
	1253	Wedgetail	1	S	Low		
	1300	Bulwer's	2	-	420	one collected RM	
	1304	W-n Petrel	1	ENE	Low		
	1315	SOOTY Tern	1	ENE	60'	collected RM	
	1330	SOOTY Shear	1	S	Low	collected RM	
	1331	Wedgetail	2	SSE	Low		
F	1345	SOOTY Tern	20		70'	not feeding	
		Wedgetail	2		Low		
	1357	Bulwer's	1	N	Low		
	1400	SOOTY Shear	1	SE	Low		
	1403	Wedgetail	2	SE	Low		
	1403	"	1	SW	"		
	1406	Bulwer's	1	N	"		

F-13-718  
FF-0-0

Pale-footed Shearwater





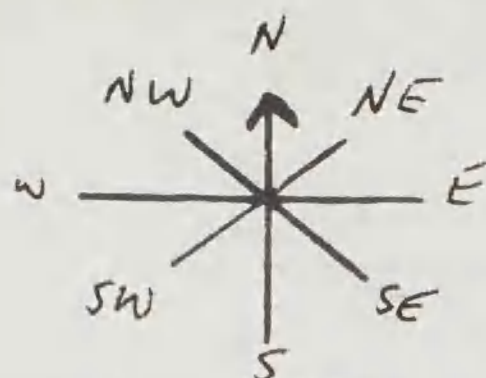
DATE 15 Sept 64  
Pg. # 5

	time	species	#	dir.	hgt.	remarks	loc.
<del>23-52</del>	1409	Wedgetail	1	S	Low		
	1412	"	1	N	"		
<del>3-86</del> F	1416	Sooty tern	40 ±10			distant ; unable to tell whether Wedgetails present. None seen feeding	
	1417	Wedgetail	1	S	Low		
<del>5-11</del>	1420	Sooty shear	1	✓ S	"		
	1422	"	2	✓ "	"		
	1423	Wedgetail	1	"	"		
<del>3-5</del>	1425	Bulwer's	1	N	"		
F	1426	Sooty tern	45 ±5				
		Wedgetail	25				
	1436	"	1	S	"		
	1442	"	1	SE	"		
	1444	"	1	E	"		
	1446	"	1	S	"		
	1451	"	1	S	"		
	1453	Sooty Shear	1	✓ SSE	"		
	1455	"	1	✓ "	"		
	1457	Wedgetail	2	"	"		
	1458	Sooty shear	6	✓ "	"		
	1459	Wedgetail	1	S	"		
	1506	Wedgetail	1	SE	Low		
	1506	Bulwer's	3	W	"	Arose from water	
	1507	Wedgetail	1	SE	"		
	1508	"	2	"	"		
	1510	"	2	"	"		
	1512	Bulwer's	1	E	"		
	1524	Wedgetail	1	"	"		
	1526	"	3	SSE	"		
	1527	"	1	"	"		
	1528	"	1	S	"		
	1528	Sooty tern	1	S	"		
<del>1-1</del>	1529	Pterodroma	1	S	"		
	1530	Wedgetail	1	"	"		
	1530	"	1	"	"		
	1531	"	1	"	"		

F - 2 - 110  
FF - 0 - 0

1 WTT collected by K.A.



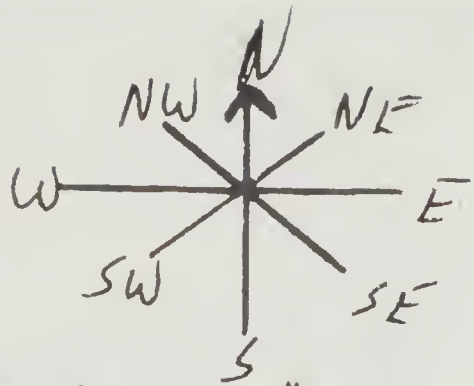


DATE 15 Sept 64  
Pg. # 6

	time	species	#	dir.	hgt.	remarks	loc.
19-16	1533	Wedgetail	1	SSE	low		
	1535	"	1	"	"		
8-11	1535	Bulwer's	1	E	"		
	1537	Wedgetail	1	SSE	"		
	1539	"	1	"	"		
	1543	Bulwer's	3	E	"		
	1543	Wedgetail	2	SSE	"		
1-1	1544	Pterodroma	1	SE	"		
	1549	Wedgetail	1	S	"		
	1550	"	1	"	"		
	1552	"	2	"	"		
	1554	"	1	"	"		
5-64	1555	Sooty tern	1	SE	10'		
	1556	"	1	"	"		
	1556	Wedgetail	1	SSW	low		
	1557	Sooty tern	1	SSE	10'		
	1558	Wedgetail	3	S	low		
3-21	1605	SOOTY SHEAR	3	✓ S	"		
	1607	WEDGETAIL	2	S	"		
	1610	"	3	S	"		
	1612	"	1	S	"		
	1621	Bulwer's	1	SE	"		
	1622	"	1	N	"		
	1626	SOOTY SHEAR	1	✓ S	"		
FF	1630	SOOTY TERN	60 ± 10				
		WEDGETAIL	50 ± 10			FEEDING, - immatures in flock - 15 ± 5	
	1640	BULWER'S	1	S	"		
	1645	SOOTY TERN	1	S	"		
	1645	BULWER'S	1	N	"		
	1651	Wedgetail	1	S	Low		
	1701	Bulwer's	1	S	Low		
2-2	1704	Bonin Is P	1	N	Low		
	1706	Wedgetail	1	SE	low		
F	1713	Sooty Shear	25	SE	Low		
	1714	Wedgetail	1	S	Low		
	1716	"	2	S	Low		
	1716	Bulwer's	2	S	Low		
	1716	Bonin Is	1	N	low		

F - 2 - 135  
FF - 1 - 25



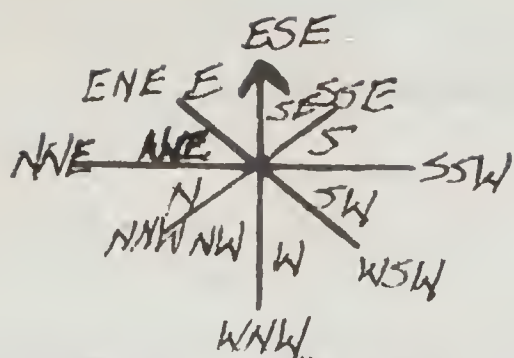


DATE 15 Sept 1964  
Pg. # 7

	time	species	#	dir.	hgt.	remarks	loc.
<del>4-14</del>	1719	WedgeTail	2	S	Low		
	1720	"	2	S	Low		
<del>4-8F</del>	1721	Sooty Tern	5	S	Low	not feeding	
<del>2-2</del>	1723	Bonin Is	1	N	Low		
	1723	WedgeTail	1	S	Low		
<del>4-62</del>	1725	Sooty Shear	1	SW	Low		
	1725	WedgeTail	2	S	Low		
<del>3-3</del>	1730	Bulwer's P	1	S	Low		
	1736	WedgeTail	1	S	Low		
F	1740	SOOTY SHEAR	10	S	"		
	1742	WEDGETAIL	1	S	"		
	1745	"	1	S	"		
	1747	"	1	S	"		
	1747	SOOTY TERN	1	S	"		
	1752	WedgeTail	1	S	"		
	1752	Sooty Tern	1	S	"		
	1752	WedgeTail	1	S	"		
	1753	Bonin	1	S	"		
	1755	Sooty Tern	1	SE	"		
	1802	<del>Bonin?</del> Bulwer's	1	N	"		
F	1807	Sooty Shear	50+10	S	"		
	1810	"	1	S	"		
	1810	Bulwer's	1	N	"		
	1824	WedgeTail	1	N	"		
	1830					APPARENT SUNSET	

F - 3 - 65  
FF - 0 - 0

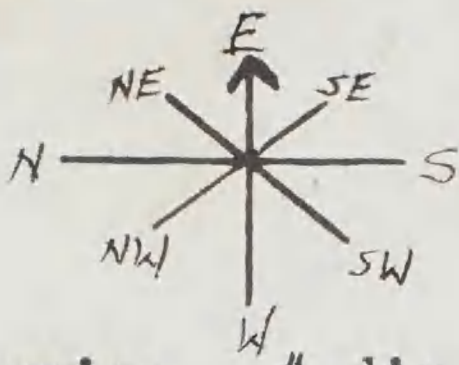




DATE 20 SEPT 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0830	LEAVE LAYSAN ISLAND HEADING DUE SOUTH. LAYSAN DUE EAST OF SHIP. Birds in Area - Fairy Tern, Frigate, Bonin Is., Sooty Tern, Wedgetails, Masked Booby, Frigate in Column over Laysan, Sooties just visible, with glasses.					
0905	ON COURSE - COMMENCE OBSERVATIONS.					
4-359 0905	FRIGATE	6	E	070200'	- one attacking feeding Wedgetail.	
7-12 0905	WEDGETAIL	3	SE	low	- feeding	
0910	"	1	NNE	"	- heading into LAYSAN	
7-9 0910	SOOTY TERN	1	"	"		
0915	FRIGATE	2	E	150'		
0915	WEDGETAIL	1	E	low		
0916	SOOTY TERN	1	ESE	40'		
(F) 0920	<del>SOOTY TERN</del> GR. FRIGATE	350±50	SE	010250'	SOME birds diving to water (50±10) other in columns to great height (250'). Flock over SCHOOL OF PORPOISE (ESTIMATE 150-200)	
0925	SOOTY TERN	1	N	low		
7-11 0927	BONIN Is.	1	NW	"		
0927	WEDGETAIL	1	SE	"		
0930	SCHOOL OF PORPOISE HEADING SOUTH.					
1-7 0931	R.F. BOOBY	1	SE	1030'		
0932	WEDGETAIL	3	ESE	low		
0935	"	2	"	"		
1-2 0940	SHEAR-PET	2	N	"		
0941	SOOTY TERN	1	ESE	30'		
1-7 0941	FAIRY TERN	1	ESE	80'		
0942	BONIN Is.	2	"	low		
0942	FRIGATE	1	"	200'		
0945	LAYSAN STILL IN SIGHT (EST. 10 MI distant TO NW)					
0948	BONIN Is	2	E	low		
1-7 0951	SOOTY SHEAR(?)	1	SE	"		
0953	SOOTY TERN	1	N	"		
0954	BONIN Is	1	SE	"		
0954	SOOTY TERN	1	ESE	"		
0954	"	1	NW	60'		
3-4 0958	COMMON NODDY	1	ESE	LOW		
1000	"	1	"	"		
1000	BONIN Is.	2	"	"		
1000	"	1	"	"		
1000	"	2	N	"		
1003	Com. NODDY	2	NW	"		
1003	WEDGETAIL	1	SE	"		





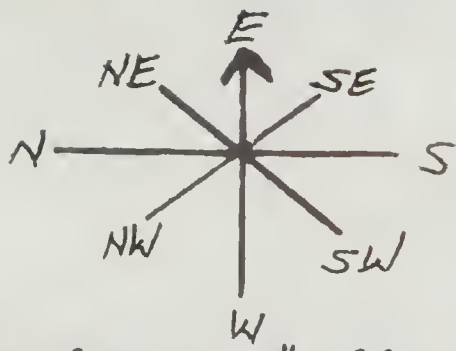
DATE 20 SEPT 64  
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
13-22	1005	SOOTY TERN	1	W	LOW		
3-8	1009	FRIGATE	1	⊙	150'		
9-9	1009	BONIN Is.	1	NW	LOW		
	1019	"	1	NE	LOW		
8-18	1019	WEDGETAIL	1	⊙	"		
	1023	SOOTY TERN	3	NW	"		
	1023	"	2	E	"		
4-5	1025	Bulwer's	1	SE	"		
	1026	BONIN Is.	1	S	"		
	1030	SOOTY TERN	1	⊙	100'		
	1030	WEDGETAIL	1	⊙	LOW		
	1034	BONIN Is.	1	E	LOW		
4-1	1034	R-T. TROPIC	1	E	100'		
2-2	1039	R.F. BOOBY	1	E	"		
	1041	BONIN	1	E	LOW		
	1045	SOOTY TERN	1	NE	50'		
	1050	"	2	N	LOW		
	1053	WEDGETAIL	1	NW	"		
	1055	SOOTY TERN	1	W	"		
	1056	WEDGETAIL	1	SE	"		
	1100	BONIN Is.	1	E	"		
	1100	Bulwer's	2	"	"		
	1102	WEDGETAIL	2	E	"		
	1103	BONIN Is.	1	SE	"		
	1107	Bulwer's	1	WNE	"		
	1128	SOOTY TERN	2	S	"		
	1128	"	2	NW	"		
	1139	BONIN Is.	1	NE	"		
	1145	SOOTY TERN	2	W	100'		
	1147	"	2	W	40'		
	1150	- - -	-	-	-	LUNCH BREAK - SINGLE OBSERVER	
	1220	Wedgetail	1	W	LOW		
1-1	1221	Pterodroma	1	E	"		
	1224	Sooty tern	1	W	"		
	1229	Bulwer's	1	E	"		
	1231	BONIN Is.	1	E	"		
	1234	WEDGETAIL	2	⊙	"		
FF	1236	Wedgetail	9	⊙			
		FRIGATE	1	⊙			
		R-F. BOOBY	1			Feeding imm Ad.	
	1239	FRIGATE	3	E	150'		
	1239	SOOTY TERN	2	NW	60'		
1-1	1239	BOOBY Sp.	2	-	0	sitting ON H <sub>2</sub> O	


FF-1-11

-following Ship. Is. Laysan Imm. - (Orange Paint.)



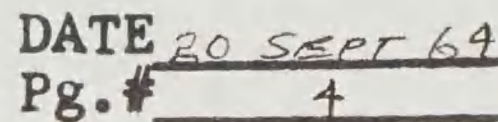


DATE 20 SEPT 69  
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
13-22	1245	WEDGETAIL	1	—	0'		
2-13	1245	Bulwer's	1	—	0'	> SITTING Together on H <sub>2</sub> O	
	1246	Wedgetail	5	W	LOW		
	1247	Bulwer's	1	W	"		
1-2	1249	FRIGATE	2	W	"		
8-27	1250	SOOTY TERN	2	W	175'		
	1254	WEDGETAIL	1	NW	LOW		
	1300	SOOTY TERN	2	N	LOW		
3-4	1302	SOOTY SHEAR	1	NW	50'		
	1309	WEDGETAIL	1	SE	LOW		
	1311	"	1	"	"		
	1311	SOOTY SHEAR	2	SE	"		
	1316	WEDGETAIL	1	<del>SE</del>	"		
	1319	SOOTY TERN	2	NW	"		
	1321	WEDGETAIL	1	"	"		
2-2	1329	BONIN Is.	1	SE	"		
	1331	WEDGETAIL	1	NE	"		
	1331	SOOTY TERN	1	NE	60'		
	1336	Bulwer's	1	E	LOW		
	1337	SOOTY TERN	2	WNW	150'		
	1342	WEDGETAIL	1	<del>SE</del>	LOW		
1-1	1342	SP. Tropic	1	SE	0' to 100'	- DOVE 	
1-1	1350	MASKED BOOBY	1	NW	LOW	- Ad.	
	1350	SOOTY TERN	5	NW	80'		
	1350	WEDGETAIL	1	<del>SE</del>	LOW		
	1352	Bulwer's	1	SE	"		
	1356	WEDGETAIL	1	NW	"		
	1356	Bulwer's	1	SE	"		
	1402	SOOTY SHEAR	1	—	0'		
	1410	WEDGETAIL	2	NW	LOW	Sitting ON H <sub>2</sub> O - Arising & realighting - Not seen feeding	
	1413	SOOTY TERN	2	"	60'		
	1413	WEDGETAIL	1	<del>SE</del>	LOW		
	1414	BONIN Is.	1	E	"		
FF	1415	WEDGETAIL	60 ± 10	W	LOW	Appear TO be feeding - No Flying fish seen	
F	1420	WEDGETAIL	50 ± 10	W	"	Loose & Not feeding	
		Bulwer's	3				
	1424	Bulwer's	1	LOW	E		
1-1	1428	BOOBY Sp.	1	N	LOW	- PROBABLE MASKED	
	1428	WEDGETAIL	1	<del>SE</del>	"		
F	1430	WEDGETAIL	90 ± 10	W	"	- 2 Dark phase Flocks loose & Not feeding.	
		Bulwer's	2	"	"		
	1437	"	2	W	"		
	1442	WEDGETAIL	3	<del>SE</del>	LOW		

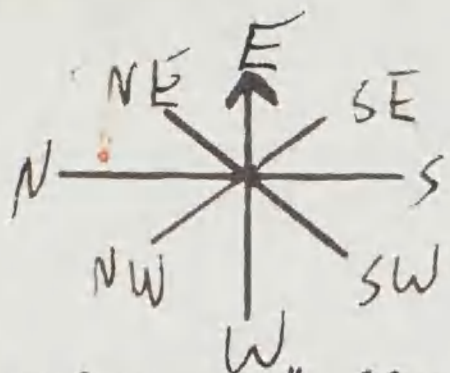
F-1-92  
FF-0-0





(All observations for 20 Sept made by single observer - J.W.)

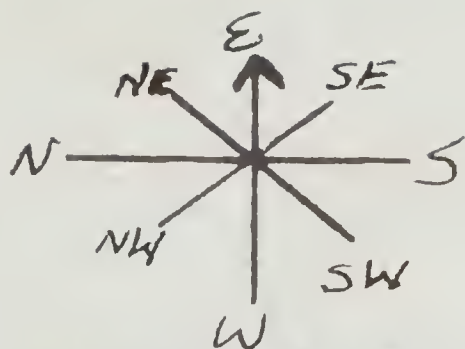




DATE 2 Sept 64  
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0540	- - -	-	-	-	- Begin observation	
	0600					Sun up	
	0612	R-T Tropic	1	E	75'	immature	
	0617	Wedgetail	1	S	Low		
	0622	Shear-Petrel	1	E	Low		
	<del>0624</del>	<del>Shear-Petrel</del>	<del>1</del>	<del>E</del>	<del>Low</del>		
	0635	Haw. Noddy	1	E	Low	followed ship 15-20'	
	0635	Wedgetail	1	E	Low		
	0644	Shear-Pet	1	S	Low		
	0646	Sooty Shear	1	SSE	Low		
	0643	Wedgetail	2	"	"		
	0646	Sooty tern	1	NNW	20'		
	0649	Wedgetail	1	SSE	Low		
	0650	Bulwer's	1	"	"		
FF	0705	Sooty Tern	8	↻	Low	appeared to be feeding.	
		Wedgetail	20	↻	Low		
	0707	Wedgetail	1	N	Low		
FF	0713	Wedgetail	35	↻	Low	appeared to be feeding	
		Gr Frigate	1	↻	10-20'	Frigate chasing Wedgetails	
		Sooty Tern	1		70'		
	0717	Sooty tern	1	S	40'		
	0736	Wedgetail	1	E	Low		
	0747	Sooty tern	1	SW	15'		
	0806	Wedgetail	1	N	Low		
	0830	Bonin Is. Pet.	1	E	Low		
	0853	Harcourts	1	NW	"		
	0856	Wh. T. Tropic	1	NE	to 50'		
	0857	Frigate Bird	1	E	Low to 30'	was chasing the following wedgetail.	
		(Imm)					
	0857	Wedgetail	54	S	Low		
	0859	"	3	↻	Low		
	0900	"	1	↻ SW	"		
	0920	"	1	E	"		
FF	0925	Sooty Tern	30	↻		Appear to be feeding	
		Wedgetail	40				
		Frigate	3				

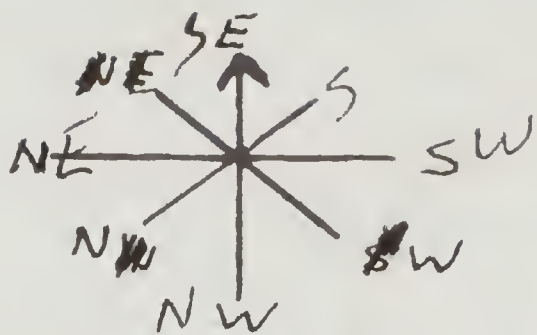




DATE 21 Sept 64  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
0934	Harcourts	2	⊙	low	feeding, alighting on water	
0934	Wedgetail	1	NNE	"		
1003	"	1	N	"		
1011	"	1	E	"		
FF 1012	FRIGATE	3		0'		
	WEDGETAIL	40±10		TO		
	SOOTY TERN	35±10		150'	Feeding - All species.	
	FAIRY TERN	3				
1025	- - -	-	-	-	SHARK - (6') - HEADED SOUTH	
1027	HARCOURT'S	1	E	low		
1056	SOOTY SHEAR	3	SSE	low		
F 1058	WEDGETAIL	12	N	low		
	FRIGATE	1				
1105	SOOTY TERN	1	JW	60'		
1106	FRIGATE	1	-	130'		
1110	WEDGETAIL	1	S	low		
1111	"	1	"	"		
1116	SOOTY SHEAR	4	SSE	"		
FF 1123	FRIGATE	3		0'		
	WEDGETAIL	80±10		TO	Feeding!	
	BULWER'S	1		150'		
	SOOTY TERN	4				
1137	WEDGETAIL	1	E	low		
1144	PIERODROMA	1	E	"	-PROBABLE BONIN	
1146	WEDGETAIL	1	NW	"		
FF 1154	WEDGETAIL	200±25				
	SOOTY TERN	18			1 - imm	
	FAIRY TERN	4	N	TO 60'		
	MASKED BOOBY	1			SUB-Adult	
1200	WEDGETAIL	1	⊙	low		
1203	Golden Plover	1	N	50'		
1209	Shearwater	1	-	H2O	either Sooty or dark phase Wedgetail	
1227	W Frigate	1	⊙	50'		
1227	Wedgetail	1	⊙	Low		
1230	"	2	W	"		
1230	"	1	W	"		
1250	Frigate	1	S	75'	Imm.	
1252	"	1	⊙	to 50'	chasing bird below which could not be seen	

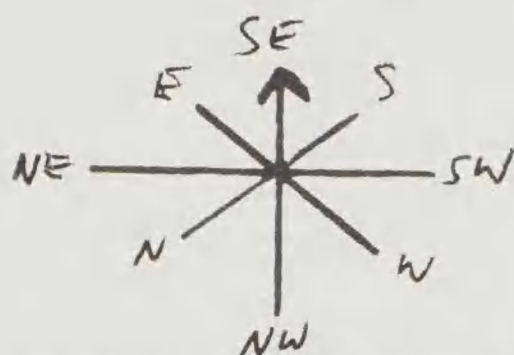




DATE 21 Sept 64  
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
10-15	1259	Frigate	1	NE	50'	♀ <del>seems</del> - seems to be feeding	
	1301	Gr Frigate	1	E	70'		
2-3	1324	Harcourt	1	N	Low		
	1355	Harcourt	2	<del>SW</del>	Low		
2-3	1410	Booby sp	2	⊙	"	PROBABLE MASKED	
	1410	FRIGATE, Gr.	1	⊙	"	DIVING ON BOOBY'S } SCHOOL OF PORPOISE BENEATH	
10-30	1413	WEDGETAIL	1	N	"	diving on fish	
	1417	"	1	N	"		
1-1	1436	Shear-Pet	1	S	"	(Balise)	
	1441	Wedgetail	2	NW	"		
1-3	1503	Sooty shear	1	SSE	"		
	1504	- - -	-	-	-	- BASSWOOD sighted	
	1515	WEDGETAIL	2	S	"		
	1517	"	1	SSE	"		
	1520	FRIGATE	1	E	150'		
2-7	1522	FAIRY TERN	1	NW	100'		
	1529	Wedgetail	1	W	100'-99'		
1-2	1535	R.-F. BOOBY	1	E	Low		
	1535	FRIGATE	3	-	150'	- stop for AT SEA personnel transfer w/BASSWOOD	
	1543	Wedgetail	1	SE	Low	La Perouse in sight	
	1600	"	1	N	"		
2-3	1603	Masked Booby	2	ESE	Low	on H <sub>2</sub> O 1st adult	
	1604	Gr Frigate	3	⊙	100'		
FF	1617	Com. Noddy	60	⊙	Low	immature feeding	
		Wedgetail	20				
		R.-F. Booby	1				
	1647	Mask Booby	1	ENE	Low		
FF	1655	Com Noddy	16	NE	Low	not feeding.	
		Wedgetail	2	NE	Low		
1-1	1656	Bonin I Pet	1	SW	Low		
	1657	Gr Frigate	1	⊙	200'	over La Perouse	
	1659	Wedgetail	4	NE	Low		
	1703	Booby	1	N	"	R. for masked	
	1703	Frigate	2	NE	150'		
	1704	"	1	<del>NE</del>	"		
	1706	Fairy tern	1	NE	60'	} homing to La Perouse	
	1707	Sooty Shear	2	SSE	Low		
	1710	Frigate	1	NNE	120'		
	1711	Fairy tern	2	"	50'		

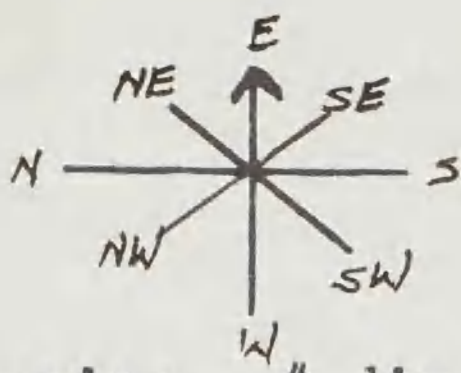




DATE 21 Sept 64  
Pg. # 4

	time	species	#	dir.	hgt.	remarks	loc.
<del>5-62</del>	1719	Wedgetail	1	NNE	low		
<del>FF</del>	1720	Com noddy	110 <sup>±</sup> 10		"	feeding	
<del>LT</del>		Booby sp.	1				
<del>5-24</del>	1720	Fairy tern	2	NNE	50'		
<del>FF</del>	1730	Wedgetail	55				
<del>1-2</del>		Mask Booby	2	(N)	low	feeding	
	1732	Fairy Tern	3	WSW	Low		
<del>F</del>	1734	R-f Booby	5	NNE	Low	2 adults 1 subadult 2 immature not feeding	
<del>3-8</del>	1736	Haw. Noddy	2	NNE	Low		
<del>3-3</del>	1737	R-f Booby	1	NE	Low		
	1740	Wedgetail sh.	1	NW	Low		
	1741	Fairy Tern	1	NNE	Low		
<del>LT</del>	1742	Brown Boob. Ad.	1	NNE	Low		
	1744	Fairy Tern	17	NNE	low to 60'	Loose group - unable to determine whether feeding	
	1755	R-f Booby	2	N	Low		
	1755	Fairy Tern	1	N	50'		
	1801	Wedgetail	1	SE	Low		
	1803	Haw. Noddy	1	N	Low		
	1805	Wedgetail	4	SE	low		
	1805	Sun Down.					

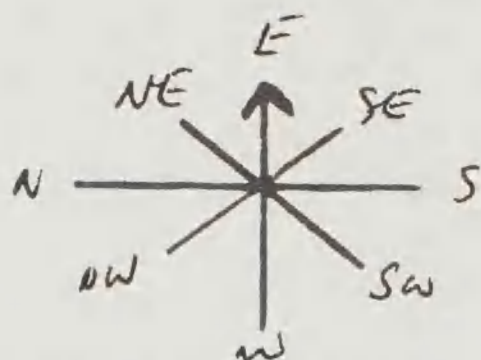




DATE 22 SEPT 64  
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0650	—	—	—	—	SUNRISE	
2-2	0619	W-T. TROPIC	1	E	150'		
4-4	0635	SHEAR-PET	1	S	LOW	- DISTANT	
3-3	0641	Ruddy TURNSTONE	1	E	LOW		
	0656	W-T. TROPIC	1	SE	125'		
1-1	0658	PTERODROMA	1	S	LOW		
LT	0659	FRIGATE	1	⊙	100'		
1-2	0713	TROPIC BIRD	2	—	0'	- SITTING ON H <sub>2</sub> O	
5-7	0724	SOOTY SHEAR	1	SSE	LOW		
4-6	0740	BONIN Is.	2	S	"		
	0742	SOOTY SHEAR	2	SSE	"		
6-7	0752	Bulwer's	2	E	"		
	0754	BONIN Is.	1	E	"		
10-10	0756	WEDGETAIL	1	NW	"		
	0806	SOOTY Shear	1	SE	LOW		
	0814	Shear-Pet	1	SE	LOW		
	0836	Bulwer's	1	NE	LOW		
	0840	Wedgetail	1	⊙N	LOW		
	0851	Wedgetail	1	ESE	LOW		
	0915	"	1	E	"		
	0917	SOOTY Shear	1	SE	LOW		
	0920	"	2	S	"		
	0925	Bulwers	1	S	"		
	0937	Bonin IP	2	E	LOW		
	0942	Ruddy Turn	1	E	TO 50'		
	0957	Wedgetail	1	E	LOW		
	1005	Shear Pet	1	NW	"		
	1007	Bulwer's	1	ENE	"		
	1008	Wedgetail	1	"	"		
	1016	SHEAR-PET	1	SSW	LOW		
	1016	RUDDY TURN	1	⊙	"		
	1046	Bulwer's	1	NE	"		
	1048	Wedgetail	1	E	"		
	1049	"	1	"	"		
	1055	BONIN Is.	1	S	"		
	1102	Bulwer's	1	SSW	"		
	1103	Wedgetail	1	S	"		
	1105	"	1	N	"		

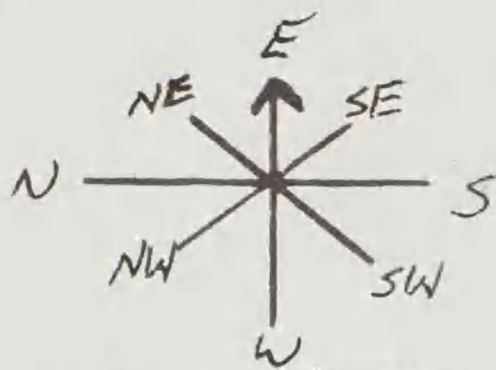




DATE 22 Sept 64  
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
5-11	1109	Fairy Tern	1	NW	100'		
7-9	1115	Bulwer's	1	S	Low		
	1116	FAIRY TERN	1	E	40'		
10-35	1119	Wedgetail	1	N	Low		
2-2	1120	Bonin Is.	2	N	"		
	1120	Bulwer's	1	"	"		
	1128	Wedgetail	1	W	"		
	1135	"	1	N	"		
	1135	BOLWER'S	1	N	"		
1-10	1150	R-T Tropic	1	NE	40'		
9	1212	Wedgetail	2	E	Low	<del>XXXXXXXXXX</del>	
4-1	1217	<del>Bulwer's</del> SOOTY TERN	1	S	50'		
	1233	Wedgetail	1	E	Low		
	1240	Bonin Is	1	E	Low		
	1240	Fairy Tern	1	SE	50'		
	1247	Wedgetail sh.	1	SW	Low		
	1248	Bulwer's	1	N	Low		
	1250	Fairy Tern	4	SE	30'		
FF	1257					Ship sighted on horizon near ahead-tanker	
	1300	Wedgetail	25	SE	Low	Feeding.	
		Fairy Tern	4				
2-40		C. Noddy Tern	30				
1-1	1302	Sanderling	1	SE	Low	circling ship	
	1315					MAN OVERBOARD DRILL - ship circled to retrieve life ring (missed)	
	1324	Bulwer's	1	S	Low		
2-8	1328	Sooty Shear	1	SE	Low		
F	1335	Can. Noddy	10	SE	Low		
	1336	Wedgetail	1	E	Low		
	1347	Bulwer's	1	S	Low		
	1355	Wedgetail	1	S	Low		
	1359	Wedgetail	1	W	LOW		
	1411	Sooty Shear	1	SE	"		
	1411	Bulwer's	1	N	"		
1-1	1424	Tropic bird	1	W	"	feeding or getting off water	
1-2	1430	Shear-Pet	2	S	"		

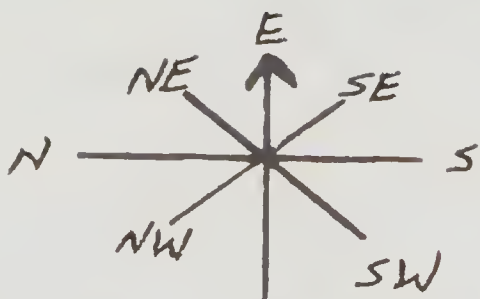




DATE 22 Sept 64  
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
14-T3	1438	Bulwers	1	E	low		
	1438	"	2	E	low		
3-TT	1438	Fairy Tern	2	⊙	"		
7-T	1444	Wedgetail	1	N	"		
13-TS	1450	Bulwers	2	}	H <sub>2</sub> O		
14-T		Sooty Shear	1				
		Harcourts	1				
	1451	Wedgetail	1	SE	low		
	1455	Sooty Shear	1	SE	"		
	1459	"	1	SE	"		
12-T	1459	Shear-Pet	1	S	"		
	1501	Sooty Shear	1	E	"	Probably going around ship	
	1511	Wedgetail	1	E	"		
	1514	Bulwers	1	E	"		
	1516	Wedgetail	1	N	"		
	1525	Sooty Shear	1	SE	"		
	1529	Bird	1	ESE	"	Tern? Brown, resembled imm. Sooty, not flying like Sooty. Golden Plover?	
Same?	1530	Bulwers	1	S	"		
	1531	Sooty Shear	1	SE	"		
	1531	"	2	SE	"		
	1535	"	1	SE	"		
	1535	Golden Plover	1	E	"		
	1537	Sooty Shear	2	SE	"		
	1538	"	1	SE	"		
	1544	"	1	SE	"		
	1544	Bulwers	1	⊙	"		
	1546	Sooty Shear	1	SE	"		
	1549	Fairy Tern	3	⊙	"	Feeding	
	1550	Bulwers	1	SE	"		
	1551	"	1	NW	"		
FF	1555	Fairy Tern	C	N	"	Feeding	
	1555	Wedgetail	1	N	"		
	1555	Sooty Shear	1	H <sub>2</sub> O	"		
	1605	WEDGETAIL	1	N	"		
	1611	Bulwer's	1	S	"		
	1634	"	1	N	"		
	1634	"	1	S	"		
	1643	Wedgetail	1	N	"		

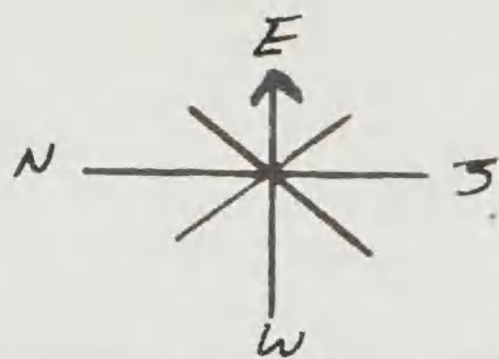




DATE 22 SEPT 64  
Pg. # 4

	time	species	#	dir.	hgt.	remarks	loc.
<del>1</del>	1654	Sooty Shear	1	SSE	Low		
<del>2</del>	1654	Bulwer's P	4	E	Low		
<del>3</del>	1657	Rnd Turnstone	1	⊙	60'		
<del>4</del>	1659	R-T Tropic bird	1	-	H <sub>20</sub>		
	1700	Bulwer's P	1	LN	low		
<del>5</del>	1702	R-f Booby	1	W	50'		
<del>6</del>	1707	Sooty Tern	2	W	60'		
	1709	Bulwer's	1	NE	low		
	1710	"	1	E	"		
	1714						
<del>7</del>	FF 1725	WEDGETAIL	450±50			Porpoise 1 facing W	
<del>8</del>		FAIRY TERN	8			3 dk. Phase	
<del>9</del>		FRIGATE	3	⊙	0'		
<del>10</del>		<del>BLUE-GRAY NOD</del>			TO		
<del>11</del>	1733	<del>WEDGETAIL</del>	1	⊙	150'		
					30'	-imm.	
	1740	WEDGETAIL	7	⊙	Low		
	1743	Bulwer's	1	E	"		
	1745	-	-	-	-	SUNSET	

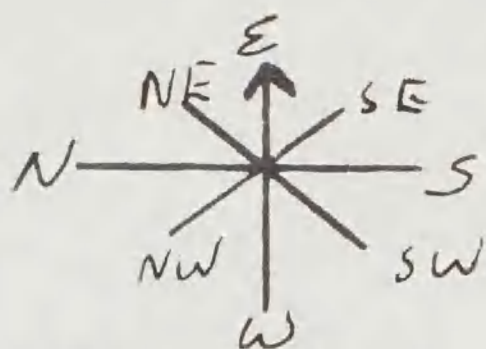




DATE 23 Sept 64  
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	<del>0632</del> 0640	Sunrise	1	UP	-	- Begin observations; Kaula off port, Niihau in sight	
<del>2-9</del>	0642	M. Booby	2	SE	low		
<del>18-21</del>	0645	Wedgetail	1	W	"		
<del>5-11</del>	0646	Sooty Tern	3	E	20'		
	0648	Wedgetail	1	NW	low		
	0649	M. Booby	7	S	low		
	0650	Wedgetail	1	S	"		
	0650	"	4	S	"		
<del>2-6</del>	0652	Sooty Shear	3	SE	"		
	0653	Wedgetail	1	S	"		
<del>3-4</del>	0654	Noddy sp.	2	NW	"		
	0655	Wedgetail	1	S	"		
<del>4-4</del>	0655	Red-foot	1	S	"		
	0655	Wedgetail	1	S	"		
	0657	Red-foot	1	S	"		
	0657	Wedgetail	1	SE	"		
<del>1-3</del>	0657	Booby sp	3	S	"		
	0700	Wedgetail	1	SE	"		
	0700	"	1	SE	"		
	0702	"	1	SE	"		
	0704	Noddy sp.	1	SE	"		
	0704	Sooty Shear	3	SE	"		
	0705	Wedgetail	1	S	"		
	0705	Red-foot	1	S	"		
	0707	Sooty Tern	3	S	"		
<del>3-4</del>	0707	Brown Booby	2	S	"	Ad.	
	0707	Red-foot	1	S	"		
	0708	Wedgetail	1	S	"		
	0708	"	1	S	"		
	0710	Sooty Tern	2	SE	"		
	0710	"	1	SE	"		
	0710	Wedgetail	1	S	"		
	0710	"	1	S	"		
	0710	"	1	S	"		
	0710	Brown Boob	1	S	"		
	0711	Sooty Tern	2	SE	"		
	0719	Noddy sp	1	SE-E	"		
	0720	Brown Booby	1	SE	"		
<del>1-2</del>	0720	Tern sp	2	SE	"		
	0720	Wedgetail	1	SE	"		

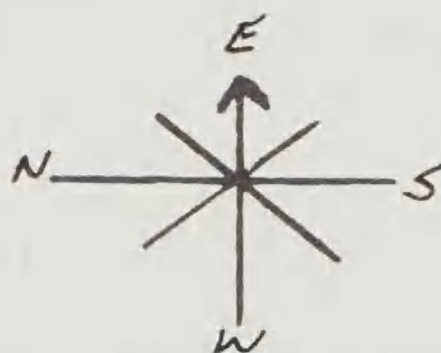




DATE 23 Sept 64  
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
<del>4-6</del>	0721	Tern	1	S	low		
<del>3-3</del>	0722	Sooty Tern	1	SE	"		
<del>10-11</del>	0722	Wedgetail	1	SE	"		
<del>10-25</del>	0725	Sooty Shear	1	SE	"		
<del>2-3</del>	0730	Brown Booby	2	—	just above H <sub>2</sub> O	Sitting on a board; one got up & circled	
	0732	Terns	2	SE	low		
	0735	Sooty Shear	2	SE	"		
	0738	" "	10	SE	"	1-1-1-1-2-2-2	
	0743	Wedgetail	1	SE	"		
	0745	Brown Booby	1	ESE	"		
	0745	Sooty Shear	6	ESE	"	1 + 5	
	0747	" "	1	SE	"		
	0747	Sooty Tern	1	SE	10'		
<del>1-1</del>	0749	Noddy Sp.	1	S	low		
	0750	Sooty Tern	2	SE	"		
<del>1-1</del>	0751	C. Noddy	1	W	"		
	0755	—	—	—	—	Kauai now visible	
	0800	Sooty Shear	1	SE	low		
	0804	Sooty Shear	1	SE	Low		
	0806	Sooty Shear	1	SE	Low		
	0809	Sooty Shear	2	SE	Low		
	0813	Sooty Shear	3	SE	Low		
	0815	Wedgetail	1	SE	Low		
<del>3-3</del>	0827	Bulwer's	1	NE	Low		
	0834	Wedgetail	1	E	Low		
	0841	Wedgetail	1	S	Low		
	0845	Wedgetail	1	E	Low		
	0851	Wedgetail	1	S	Low		
	0854	1 Tern	1	SE	Low		
	0921	Wedgetail	1	SW	Low		
	0924	Tern	2	W	60'		
	0944	Bulwer's	1	S	Low		
	0955	Wedgetail	1	E	Low		
	0956	Bulwer's	1	W	Low		
<del>1-1</del>	0959	Fairy Tern	1	E	50'		
	1005	SOOTY TERN	1	N	Low		
	1006	WEDGETAIL	2	S	Low		

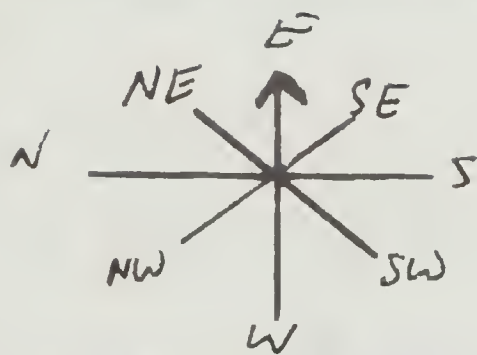




DATE 23 Sept 64  
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
<del>2-2</del>	1020	Newells	1	N	low		
<del>1-1</del>	1020	Shear-Pet	1	S	"		
<del>2-9</del>	1030	WEDGETAIL	1	N	"		
	1035	"	1	W	"		
	1035	"	1	N	"		
<del>14-35</del>	1043	Sooty Shear	1	SE	"		
	1045	Wedgetail	1	W	"		
	1050	"	1	N	"		
	1050	"	1	S	"		
	1050	Sooty Shear	1	SE	"		
<del>2-2</del>	1051	C. Noddy	1	N	"		
	1102	Sooty Shear	1	SE	"		
	1105	C. Noddy	1	N	"		
	1105	Wedgetail	1	E	"		
	1110	Sooty Shear	1	SE	"		
	1110	Wedgetail	1	S	"		
<del>1-1</del>	1110	Noddy sp.	1	N	"		
	1112	Sooty Shear	2	SE	"		
	1115	" "	18	SE	"	long string	
<del>1-1</del>	1115	Bulwers	1	E	"		
	1116	Sooty Shear	1	SE	"		
<del>2-2</del>	1116	Fairy Tern	1	E	"		
	1120	Sooty Shear	1	SE	"		
	1122	" "	2	SE	"		
<del>1-1</del>	1125	Red-foot B.	1	E	"		
	1129	Sooty Shear	2	SE	"		
	1131	" "	1	SE	"		
	1138	Newells	1	N	"		
	1139	Sooty Shear	1	SE	"		
	1148	— — —	—	—	—	- passed large black rubber donut on H <sub>2</sub> O	
	1150	Sooty Shear	1	SE	"		
<del>4-63</del>	1200	Sooty Tern	1	NE	"		
	1205	"	10	W	30'		
	1207	"	2	NWN	40'		
	1209	Sooty shear	2	SSE	low		
FF	1214	Sooty tern	50-10			feeding	
		Fairy tern	1				
<del>1-1</del>		Frigate	1				
<del>1-2</del>	1127	Wedgetail	1	E	low		
<del>1-1</del>	1128	Storm petrel	1	"	"	No white rump visible; flew like Harcourts, same size = Sooty? Could not see tail shape clearly	

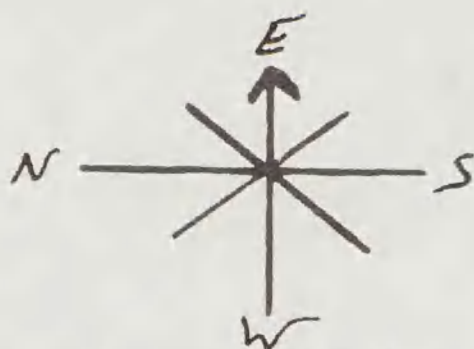




DATE 27 Sept 64  
Pg. # 4

	time	species	#	dir.	hgt.	remarks	loc.
3-4	1238	Sooty tern	1	N	low		
	1244	"	1	"	"		
3-3	1253	Sooty shear	1	SE	"		
12-11	1255	Wedgetail	1	ENE	"		
11-1	1306	Wh-T Tropic	1	SW	50'		
	1310	Wedgetail	1	NNW	low		
	1315	Sooty tern	2	"	40'		
	1317	Wedgetail	1	WSW	low		
	1327	Sooty shear	1	NNE!	"		
9-11	1332	Newelli	1	W	"		
3-3	1333	Shear. Pet	1	NNW	"		
	1340	Newelli	1	N	"		
	1354	Sooty shear	1	NNE!	"		
	1401	Shear Pet	1	SE	"		
	1411	Wedgetail	1	N	Low		
	1413	Wedgetail	1	N	Low		
	1414	NEWELL'S sh.	1	N	"		
	1420	"	1	N	"		
	1425	WEDGETAIL	1	NW	"		
	1431	Newell's	2	WNW	Low	DK PHASE	
	1439	SHEAR-PET	2	W	"		
	1443	NEWELL'S	1	S	"		
1-1	1450	Bonin Is Pet	1	NE	Low		
	1453	Wedgetail	1	WNW	Low		
	1455						
	1505					INVESTIGATE SONAR BOOY IN H <sub>2</sub> O.	
	1505	WEDGETAIL	1	W	Low		
	1513	Newell's	2	N	Low	1 DOVE INTO WATER and completely disappeared beneath the surface. Emerged after 3-5 seconds + resumed normal flight. Presumed feeding.	
2-2	1516	R.F. BOOBY	1	N	0' to Low	- Appeared to be drinking.	
	1522	WEDGETAIL	1	N	Low		
	1523	"	1	"	"		
	1542	NEWELL'S	1	W	"		
	1556	"	1	E	"		
	1558	Wedgetail	1	N	"		
1-1	1608	Fairy Tern	1	E	20'		
	1609	R.F. Boob	1	S	"	Sitting on water thrashing + squirming around - appeared to be bathing rather than feeding.	





DATE 23 Sept 64  
Pg. # 5

JP

	time	species	#	dir.	hgt.	remarks	loc.
1-1	1638	Sooty Tern	1	NW	30'		
2-2	1647	Wedgetail	1	N	low		
9-12	1647	Shear-Pet	1	SE	low		
1-1	1652	Marcouro's?	1	N	"		
	1658	Wedgetail	1	W	"		
5-6	1733	Newells	1	N	"		
1-1	1738	Shear-Pet	1	W	"	Wedgetail or Newells; diff. of opinion.	
8-9	1750	Sooty shear	1	SE	"		
	1751	Newells?	1	N	"	No white up over tail; no flepping but high gliding side to side to ~6 ft. high. Anderson?	
	1758	Sooty Shear	2	SE	"		
	1759	"	1	SE	"		
	1759	Newells?	2	SE	"	same as 1751	
	1808	SS shear	1	SE	"	<del>SS</del>	
	1810	SS	1	SE	"		
	1811	Newells?	1	N	"		
	1814	SS	1	SE	"		
	1818	SS	1	SE	"		
	1820	Newells	1	N	"		
	1828	SS	3	SE	"		
	1830	-	-	-	-	Sunset? Disappeared. Extinguished. Sizzled. Rizzled. Gone.	

END AT-SEA OBSERVATIONS  
SEPTEMBER 1964!



DATE 4 Sept. 64

Baro

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800																
0900	LEAVE - HONOLULU HARBOR -					701.7										
1000	21° 15' N	157° 56' W	Few Clouds	20	3002	83	72	65	4	4	4	090-5-6	80	22	090	245° - 10.5 KTS
1100	21° 11' N	158° 07' W	"	20	3002	83	72	65	4	4	4	090-5-6	80	22	090	247 10.5 KTS
1200	21-07N	158° 16' W	"	20	3002	83	72	65	4	4	4	090-5-6	80	22	090	247 10.5 KTS
1300	21-03N	158° 28' W	"	20	1016	83	75	80	2	2	2	090-5-6	80	17	090	247 11.5 KTS
1400	20-58N	158-39W	"	20	1014	82	75	80	1	0	0	120-6-6	80	15	100	247 11.0 KTS
1500	20-55N	158-50W	"	20	1013	82	75	80	1	0	0	120-6-6	80	13	100	247 11.0 KTS
1600	20-51N	159-01W	"	20	1013	82	75	80	1	0	0	120-6-6	81	10	100	247 11.0 KTS
1700	20-49N	159-12W	"	20	1014	82	75	80	1	0	0	120-4-5	81	10	100	245 11.0 KTS
1800	20-46N	159-23W	"	20	1014	86	75	80	1	1	1	120-4-5	81	10	100	245 11.0 KTS
1900	20-42N	159-33W	"	15	1014	86	75	80	1	1	1	120-4-5	81	10	100	245 11.0 KTS
2000	20-38 N	159-44 W	"	20	1015	87	75	76	3	2	2	120-5-5	81	10	100	247 11 KTS
2100	20 36 N	159-51 W	"	20	1015	80	75	79	3	2	2	120-5-5	81	10	100	247 11 KTS
2200	20-34 N	159-58 W	"	20	1015	80	75	79	3	1	1	120-5-5	81	10	100	247 11 KTS
2300	20-30 N	160-08 W	"	20	1015	80	75	79	3	1	1	120-5-5	81	10	100	247 11 KTS
2400	20 25 N	160-21 W	"	20	1015	80	75	79	3	1	1	120-5-5	81	10	100	247 11 KTS

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE 5 Sept. 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	20-20N	160-31W		Cloudy	15	1013	80	74	79	9	8	120-6-5	81	10	100	245 10.5 km
0200	20-18N	160-45W		"	15	1013	80	74	79	8	8	120-6-5	81	13	080	245 10.5 km
0300	20-18N	160-56W		"	15	1012	80	74	79	8	8	120-6-5	81	13	070	245 10.5 km
0400	20-06N	161-05W		"	15	1012	80	74	79	8	8	100-6-5	81	13	070	245 10.5 km
0500	20-01N	161-19W		"	8	1013	82	74	76	8	8	100-6-6	81	13	100	245 10.5 km
0600	19-56N	161-33W		"	15	1014	81	75	83	8	8	100-5-6	81	13	100	245 10.5 km
0700	19-51N	161-43W		"	15	1014	82	75	80	9	8	100-5-6	81	13	100	245 10.5 km
0800	19-51N	161-41W		"	20	1015	82	75	80	8	8	100-5-6	81	15	110	245 10.5 km
0900	19-47N	161-51W		"	20	1015	83	75	76	8	8	110-5-6	81	15	110	245 10.5 km
1000	19-43N	162-00W		"	15	1015	83	75	76	8	8	110-5-6	81	15	110	245 10.5 km
1100	19-39N	162-10W		"	15	1015	83	75	76	8	8	110-5-6	81	15	110	245 10.5 km
1200	19-35N	162-20W		"	15	1015	83	75	76	8	8	120-6-6	81	15	110	245 10.5 km
1300	19-30N	162-32W		"	15	1014	80	74	83	8	8	120-6-6	81	15	110	245 10.5 km
1400	19-26N	162-38W		"	15	1013	80	74	83	9	8	120-6-6	81	15	110	245 10.5 km
1500	19-23N	162-42W		"	15	1012	82	74	76	9	8	120-6-6	81	12	080	245 10.5 km
1600	19-20N	162-58W		"	15	1012	82	74	76	9	8	120-6-6	81	14	090	245 10.5 km
1700	19-15N	163-08W		"	15	1012	82	74	76	9	8	120-6-6	81	14	090	245 10.5 km
1800	19-12N	163-17W		"	15	1012	82	75	84	9	8	120-6-6	81	14	090	245 10.5 km
1900	07	-27		"	15	1012	82	75	84	9	8	120-6-6	81	14	080	245 10.5 km
2000	19-02N	163-38W		"	8	1013	80	73	79	8	8	120-6-6	81	15	080	245 10.5 km
2100	18-58N	163-47W		"	15	1013	80	73	79	8	8	120-6-6	81	15	080	245 10.5 km
2200	18-53N	163-57W		"	15	1013	80	73	79	8	8	120-6-6	81	15	080	245 10.5 km
2300	18-49N	164-06W		"	15	1014	80	73	79	8	8	120-6-6	81	15	080	245 10.5 km
2400	18-45N	164-16W		"	15	1014	80	73	79	8	8	120-6-6	81	15	080	245 10.5 km

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

 SI-MNH-955  
 12-5-63

12

13



DATE Sun. 6 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	18-48N	164-21W	Partly Cldy	15	1012	80	74	83	1	0	280-6-5	82	15	045	245 10 km
0200	18-43N	164-35W	" "	15	1011	80	74	83	1	0	280-6-5	82	14	030	245 10 km
0300	18-38N	164-44W	" "	15	1011	80	74	83	1	0	280-6-5	82	13	030	245 10 km
0400	18-33N	164-54W	" "	15	1011	80	74	83	1	0	280-6-5	81	14	030	245 10 km
0500	18-28N	165-04W	" "	8	1011	80	74	83	2	0	280-6-5	81	14	020	245 10 km
0600	18-24N	165-14W	" "	15	1012	80	74	83	3	0	280-6-5	81	15	349	245 10 km
0700	18-18N	165-25W	" "	15	1012	80	74	83	3	2	280-6-5	81	12	010	245 10
0800	18-14N	165-34W	" "	15	1012	80	74	83	3	2	280-6-5	81	12	010	245 10
0900	18-10N	165-43W	" "	15	1014	82	74	76	3	2	280-6-5	81	10	010	245 10
1000	18-05N	165-52W	" "	15	1014	82	74	76	3	2	280-6-5	81	10	010	245 10
1100	17-01N	166-02W	" "	15	1014	83	75	76	5	4	280-6-4	81	10	350	245 10
1200	17-57N	166-11W	" "	15	1014	83	75	76	5	4	280-6-4	81	10	350	245 10.5
1300	17-51N	166-25W	" "	20	1012	83	72	72	3	1	290-10-4	81	10	350	245 10.5
1400	17-47N	166-35W	" "	20	1012	83	72	75	4	1	290-10-4	81	12	350	245 10.5
1500	17-40N	166-46W	" "	20	1012	83	72	75	3	1	290-10-4	82	10	320	245 10.5
1600	17-36N	166-56W	" "	20	1012	83	72	75	3	1	100-10-4	82	12	030	248 10.5
1700	17-33N	167-06W	" "	20	1012	82	74	76	3	1	100-10-4	82	10	010	248 10.5
1800	17-29N	167-16W	" "	20	1012	82	74	76	4	1	100-5-6	82	10	010	248 10.5
1900	17-26N	167-25W	" "	16	1013	81	74	83	4	1	100-5-6	81	12	015	248 10.5
2000	17-22N	167-36W	" "	16	1013	81	74	83	4	1	100-5-6	81	12	015	248 10.5
2100	17-17N	167-49W	" "	15	1013	81	74	83	4	4	110-5-5	81	10	020	248 10.5
2200	17-12N	167-59W	" "	15	1014	81	74	83	4	4	110-5-5	81	10	020	248 10.5
2300	17-08N	168-09W	" "	15	1014	81	74	83	4	4	110-5-5	81	10	020	248 10.5
2400	17-05N	168-19W	" "	15	1014	81	74	83	4	4	110-5-5	81	10	020	248 10.5

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE Mon- 7 Sept- 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17-02N	168-27W	Cldy w/ rain	15	1013	81	73	79	9	8	Cal/m	82	10	015	248 10.5 km
0200	16-52N	168-35W	" "	15	1013	81	73	79	9	8	"	82	Variable		248 10 km
0300	16-55N	168-45W	" "	15	1012	80	74	83	9	8	"	82	8	100	248 10 km
0400	16-51N	168-53W	Clear	15	1012	80	74	83	9	8	"	82	8	100	248 10 km
0500	16-47N	169-04W	"	8	1012	80	76	83	9	8	"	82	5	100	248 10
0600	16-44N	169-11W	Partly Cloudy	15	1012	80	76	87	2	0	0	82	5	100	248 10K
0700	16-42 "	169-15W	"	20	1013	82	77	84	2	0	0	82	5	100	248 10K
ENTER END 0800	16-38N	169-25W	"	20	1013	82	77	84	3	0	0	82	5	100	248 10K
0900	16-30N	169-26W	FCU Clouds	20	1014	83	75	76	2	1	045	82	10	045	160 10K
1000	16-21N	169-23W	"	20	1014	83	75	76	2	1	045	82	10	045	160 10K
1100	16-11N	169-20W	"	20	1014	83	75	76	0	0	070	82	10	070	160 10.5
1200	16-01N	169-17W	"	20	1014	83	75	76	0	0	070	82	10	070	160 10.5
1300	15-53N	169-16W	"	20	1012	84	74	69	1	0	065-6-4	82	6	070	142 10.5
1400	15-43N	169-15W	"	20	1011	82	74	70	1	0	070-6-4	82	8	050	160 10.5
1500	15-32N	169-12W	"	20	1010	82	74	76	5	2	070-6-4	82	10	050	160 10.5
1600	15-23N	169-08W	"	20	1010	82	74	76	4	2	070-6-4	82	10	050	160 10.5
1700	15-14N	169-08W	"	20	1011	82	74	76	4	1	070-6-4	82	10	060	160 10.5
1800	15-05N	169-04W	"	15	1011	82	74	76	4	1	050-6-4	82	8	060	160 10.5
1900	14-52N	169-00W	CLEAR	20	1012	82	74	76	0	0	090-5-4	82	10	090	160 10
2000	14-45N	168-55W	"	20	1012	81	74	80	0	0	090-5-4	82	10	090	160 10
2100	14-38N	168-52W	"	20	1013	81	74	80	0	0	090-5-4	82	10	090	160 10
2200	14-30N	168-53W	"	20	1013	81	74	80	0	0	090-5-4	82	10	090	222 10
2300	14-22N	169-01W	"	20	1013	81	74	80	0	0	090-5-4	82	10	090	222 10
2400	14-15N	169-08W	"	20	1013	81	74	80	0	0	090-5-4	82	10	090	222 10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE Tues. 8 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SFD.
0100	14-06 N	169-17 W	Partly Cloudy	15	1012	81	73	79	4	1	090-5-4	82	12	080	222 10.5k
0200	14-00 N	169-22 W	" "	15	1011	81	73	79	4	1	090-5-4	82	12	080	222 10.5k
0300	13-53 N	169-30 W	" "	15	1011	81	73	79	1	0	090-5-4	82	10	080	222 10k
0400	13-45 N	169-32 W	" "	15	1011	81	73	79	1	0	090-5-4	82	10	080	222 10k
0500	13-37 N	169-45 W	" "	5	1011	82	77	84	1	0	090-5-4	82	12	357	222 10k
0600	13-24 N	169-52 W	" "	20	1011	82	77	84	1	0	090-5-4	82	12	357	222 10k
0700	13-25 N	170-00 W	" "	20	1012	82	74	84	1	0	090-5-4	82	12	090	222 10k
0800	13-17 N	170-06 W	" "	20	1012	82	74	74	1	0	090-5-4	82	12	090	222 10k
0900	13-22 N	170-06 W	" "	20	1013	82	74	74	2	2	090-5-4	82	10	090	222 10k
1000	13-07 N	170-15 W	Cloudy	20	1013	85	76	69	2	1	090-5-4	82	10	090	222 10k
1100	12-59 N	170-19 W	" "	15	1013	85	76	69	2	1	090-5-4	82	10	090	222 10k
1200	12-51 N	170-27 W	Partly Cloudy	10	1013	78	77	96	10	10	090-5-4	82	15	090	222 10k
1300	12-38 N	170-41 W	" "	10	1012	82	75	80	5	3	090-5-4	82	10	080	222 10.5k
1400	12-31 N	170-48 W	Partly Cloudy	15	1012	82	75	80	5	3	090-5-4	82	8	080	222 10.5
1500	12-23 N	170-55 W	" "	20	1011	82	75	80	3	1	135-7-4	82	7	080	222 10.5
1600	12-16 N	171-02 W	" "	20	1011	82	75	80	3	1	135-7-4	83	8	080	222 10.5
1700	12-07 N	171-10 W	" "	20	1011	82	77	84	6	1	135-5-4	83	8	080	222 10.5
1800	12-03 N	171-18 W	" "	20	1011	84	76	76	6	1	080-2-4	83	10	060	314 10.5
1900	12-13 N	171-25 W	" "	15	1011	82	77	84	5	1	080-2-4	82	10	060	314 10.5
2000	12-21 N	171-33 W	" "	7	1012	81	74	79	3	2	080-5-4	83	10	070	314 11
2100	12-30 N	171-43 W	Few Clouds	15	1012	81	74	79	3	2	080-5-4	83	10	070	314 11
2200	12-38 N	171-51 W	" "	15	1012	81	74	79	3	2	080-5-5	83	10	070	314 11
2300	12-46 N	171-46 W	" "	15	1012	81	74	79	3	2	080-5-5	83	10	070	048 10
2400	12-52 N	171-39 W	" "	15	1012	81	74	79	3	2	080-5-5	83	10	070	048 10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



1822

1900  
300

1/2

1825



DATE Wed 9 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	12-59 N	171-33 W	Pfly Clody	10	1011	80	76	87	3	2	080-5-5	83	7	090	048 10
0200	13-06 N	171-25 W	" "	10	1010	80	77	91	1	0	090-5-4	83	5	080	048 10
0300	13-13 N	171-18 W	" " " "	5	1009	80	77	91	3	3	090-5-4	83	5	070	048 10
0400	13-20 N	171-11 W	" " " "	10	1009	80	74	83	2	1	090-5-4	83	Variable	070	048 10
0500	13-27 N	171-04 W	" " " "	5	1010	80	76	87	2	0	090-5-4	83	13	110	048 10
0600	13-34 N	170-56 W	" " " "	15	1010	80	76	87	3	0	090-5-4	83	4	150	048 10
0700	13-36 N	170-55 W	" " " "	15	1011	80	76	87	3	0	090-5-4	83	4	150	048 10
0800	13-44 N	170-48 W	" " " "	15	1012	82	77	84	4	0	090-5-5	83	4	150	048 10
0900	13-50 N	170-37 W	Clody	10	1012	82	77	84	8	8	090-5-5	83	10	090	048 10
1000	13-58 N	170-30 W	" " " "	10	1012	84	76	76	8	8	090-5-5	83	10	090	048 10
1100	14-05 N	170-23 W	" " " "	15	1012	84	76	76	8	8	090-5-5	83	10	090	048 10
1200	14-12 N	170-16 W	" " " "	15	1012	84	76	76	8	8	090-5-5	83	10	090	048 10
1300	14-18 N	170-10 W	Pfly Clody	20	1011	84	76	76	5	4	090-5-5	83	15	090	048 10
1400	14-26 N	170-02 W	" " " "	20	1010	84	76	76	5	3	090-5-5	83	12	090	048 10
1500	14-33 N	169-55 W	" " " "	20	1010	84	76	76	5	4	090-5-5	83	15	090	048 10
1600	14-39 N	169-47 W	Clody	20	1010	84	76	76	9	8	090-5-5	83	15	090	048 10
1700	14-47 N	169-40 W	" " " "	20	1010	82	77	84	8	4	090-5-5	83	8	116	048 10
1800	14-54 N	169-32 W	" " " "	20	1010	82	74	76	7	4	090-5-5	83	8	116	048 10
1900	15-03 N	169-22 W	Clear	20	1012	82	74	76	0	0	090-5-6	83	15	090	314 - 10
2000	15-10 N	169-29 W	Clear	20	1013	82	74	76	0	0	090-5-6	83	15	090	314 - 11 KTS
2100	15-18 N	169-38 W	Clear	20	1013	82	74	76	0	0	090-5-6	83	15	090	314 - 11 "
2200	15-25 N	169-46 W	Clear	20	1013	82	74	76	0	0	090-5-6	83	15	090	314 - 11 KTS
2300	15-33 N	169-55 W	Clear	20	1013	82	74	76	0	0	090-5-6	83	15	090	314 - 11 KTS
2400	15-36 N	170-03 W	Clear	20	1013	82	74	76	0	0	090-5-6	83	15	090	314 - 11 KTS

REMARKS:

\* Passing 2000

XRAY

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE

Thurs. 10 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	15-28N	170-11W	Ptly Cldy	10	1012	81	74	83	2	0	090-5-6	82	15	080	222 17.5
0200	15-28N	170-18W	* " "	10	1012	80	74	83	4	2	090-5-6	82	17	070	222 17.5
0300	15-12N	170-25W	* " "	10	1011	80	74	83	3	1	090-5-6	82	17	080	222 17.5
0400	15-06N	170-33W	* " "	10	1011	80	74	83	3	2	090-5-6	82	17	080	222 17.5
0500	14-58N	170-42W	" "	05	1010	80	77	91	4	2	090-5-6	82	18	070	223 17.5
0600	14-49N	170-52W	"	10	1011	82	77	84	4	1	090-5-6	82	18	070	223 17.5
0700	14-48N	170-54W	"	15	1011	82	77	84	4	1	090-5-6	82	18	070	223 17.5
0800	14-40N	171-01W	"	15	1011	83	76	80	4	1	090-5-6	83	18	070	223 17.5
0900	14-32N	171-05W	"	15	1012	83	76	80	6	6	090-5-6	83	20	090	225 17.5
1000	14-25N	171-12W	"	15	1012	85	76	73	6	6	090-5-6	83	20	090	225 17.5
1100	14-15N	171-20W	"	15	1012	85	76	73	6	6	090-5-6	83	20	090	225 17.5
1200	14-08N	171-28W	"	15	1012	85	76	73	6	6	090-5-6	83	20	090	230 17.5
1300	14-03N	171-38W	"	15	1011	85	76	73	6	5	090-5-6	82	20	090	230 17.5
1400	13-56N	171-41W	"	15	1010	85	76	73	6	5	090-5-6	82	20	090	225 17.5
1500	13-48N	171-56W	"	15	1010	85	76	73	6	5	090-6-8	82	20	080	225 17.5
1600	13-41N	172-08W	"	15	1009	85	76	73	6	5	090-6-8	82	20	080	225 17.5
1700	13-33N	172-11W	"	15	1009	84	76	76	6	4	090-6-8	82	18	080	225 17.5
1800	13-25N	172-19W	"	15	1009	84	76	76	6	4	090-6-8	82	18	080	225 17.5
1900	13-18N	172-27W	"	15	1009	84	77	84	6	4	090-6-8	82	18	080	315 17.5
2000	13-21N	172-35W	"	15	1009	82	77	84	6	4	090-6-8	82	18	080	315 17.5
2100	13-32N	172-42W	Clear	15	1010	82	77	77	0	0	070-6-8	82	22	070	315 11K
2200	13-40N	172-51W	Clear	20	1012	82	77	77	0	0	070-6-8	82	22	070	315 11K
2300	13-47N	172-59W	Clear	20	1012	82	77	77	0	0	070-6-8	82	22	070	315 11K
2400	13-56N	173-01W	Clear	20	1012	82	77	77	0	0	070-6-8	82	22	070	315 11K

REMARKS:

\* w/squalls

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE 11 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14-04N	172-53W	PLV CLD	10	1012	82	77	84	4	2	090-6-8	82	17	080	048 9.5 kn
0200	14-10N	172-47W	" "	10	1011	82	77	84	2	0	090-6-8	82	17	080	048 9 kn
0300	14-16N	172-40W	" "	10	1011	82	77	84	2	0	090-6-8	82	17	080	048 9 kn
0400	14-23N	172-34W	" "	10	1011	82	77	84	3	0	090-6-8	82	17	080	048 9 kn
0500	14-29N	172-27W	" "	5	1011	82	74	76	3	0	090-6-8	82	18	080	048 9
0600	14-34N	172-19W	" "	8	1011	82	77	84	3	2	090-6-8	82	18	080	048 9 kn
0700	14-35N	172-10W	" "	10	1012	82	77	84	4	2	090-6-8	82	18	080	048 9 kn
0800	14-42N	172-11W	" "	15	1012	82	77	84	4	2	090-6-8	82	18	080	045 9 kn
0900	14-45N	172-06W	" "	15	1013	84	76	76	5	4	080-6-8	82	25	080	045 9 kn
1000	14-52N	171-57W	" "	15	1014	84	76	76	5	4	080-6-8	82	25	080	045 9 kn
1100	14-57N	171-54W	" "	15	1014	84	76	76	4	4	080-6-8	82	20	080	045 9 kn
1200	15-05N	171-47W	" "	15	1014	84	76	76	4	4	080-6-8	82	20	080	045 9 kn
1300	15-11N	171-39W	" "	15	1012	82	77	84	6	2	080-6-8	82	20	080	045 8.5
1400	15-17N	171-33W	" "	15	1011	82	77	84	8	1	080-6-8	82	20	070	045 8.5
1500	15-23N	171-27W	" "	15	1011	82	77	84	6	1	080-6-8	82	20	070	045 8.5
1600	15-30N	171-21W	" "	15	1011	82	77	84	6	1	080-6-8	82	20	080	045 8.7
1700	15-37N	171-15W	" "	15	1011	82	77	84	6	1	080-6-8	82	17	120	045 8.7
1800	15-43N	171-09W	" "	10	1011	82	77	84	6	1	080-6-8	82	17	120	045 8.7
1900	15-50N	171-02W	" "	8	1011	82	77	84	6	1	080-6-8	82	17	120	045 9.1
2000	15-56N	170-55W	" "	7	1011	82	77	84	6	1	080-6-8	82	17	120	045 9.1 kn
2100	15-02N	170-53W	FEW CLD	15	1012	82	77	84	4	3	080-6-8	82	15	080	045 8.6
2200	16-09N	170-47W	" "	15	1014	82	77	84	4	3	080-6-8	82	15	080	045 8.6
2300	16-15N	170-40W	" "	15	1014	82	77	84	4	3	080-6-8	82	15	080	045 8.6
2400	16-23N	170-49W	" "	15	1014	82	77	84	4	3	080-6-8	82	15	090	045 10.0 kn

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE 12 Sept. 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16-30 N	170-57 W	14.4	dy	15	1010	80	74	83	3	1	080-6-8	82	12	085	314 11 km
0200	16-36 N	171-05 W	"	"	15	1012	81	73	79	3	1	080-6-8	82	16	080	314 11 km
0300	16-43 N	171-12 W	"	"	15	1012	80	74	83	3	2	080-6-8	82	16	080	314 11 km
0400	39	70	"	"	15	1012	80	74	83	3	2	080-6-8	82	16	080	222 10.5 km
0500	16-35 N	171-28 W	"	"	15	1014	82	77	84	4	2	080-6-8	82	16	080	222 10.5 km
0600	16-28 N	171-50 W	"	"	8	1014	82	77	84	4	3	080-6-8	82	16	080	222 10.5 km
0700	16-18 N	171-45 W	"	"	10	1014	82	77	84	4	2	080-6-8	82	16	080	222 10.5 km
0800	16-10 N	171-52 W	"	"	10	1014	82	77	84	4	1	080-6-8	82	16	080	222 10.5 km
0900	16-13 N	171-55 W	"	"	15	1014	84	74	73	4	3	090-6-8	82	15	090	222 10.5 km
1000	16-06 N	172-03 W	"	"	15	1014	84	74	73	4	3	090-6-8	82	15	090	222 10.5 km
1100	15-59 N	172-11 W	"	"	15	1014	84	74	73	4	3	090-6-8	82	15	090	222 10.5 km
1200	15-51 N	172-20 W	"	"	15	1014	84	74	73	4	2	090-6-8	82	15	090	222 10.5 km
1300	15-48 N	172-22 W	"	"	15	1013	83	76	76	4	1	090-6-8	82	13	080	222 10.5 km
1400	15-48 N	172-28 W	"	"	15	1013	83	76	76	3	0	090-6-7	82	13	080	222 10.5 km
1500	15-38 N	172-38 W	"	"	15	1012	83	76	76	2	0	090-6-7	82	13	080	222 10.5 km
1600	15-26 N	172-45 W	"	"	15	1012	83	76	76	5	0	090-6-7	82	12	080	222 10.5 km
1700	15-19 N	172-54 W	"	"	15	1012	83	76	76	3	1	090-6-6	82	14	080	222 10.5 km
1800	15-11 N	173-01 W	"	"	15	1012	83	76	76	5	1	090-6-6	82	14	080	222 10.5 km
1900	15-02 N	173-09 W	"	"	10	1012	83	76	76	5	1	090-6-6	82	14	080	222 10.5 km
2000	14-56 N	173-17 W	"	"	7	1011	83	76	76	5	1	090-6-6	82	14	080	222 10.5 km
2100	14-48 N	173-26 W	"	"	13	1012	82	77	84	2	2	090-6-7	82	16	080	222 10.5 km
2200	14-40 N	173-33 W	"	"	15	1012	82	77	84	2	2	090-6-7	82	16	080	222 10.5 km
2300	14-33 N	173-40 W	"	"	15	1012	82	77	84	2	2	090-6-7	82	16	080	222 10.5 km
2400	14-40 N	173-49 W	"	"	15	1012	82	77	84	2	2	090-6-7	82	16	080	222 10.5 km

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE 13 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPEED
0100	14-48N	173-55W	Partly Cloudy	15	1013	82	74	83	2	1	090-6-8	82	17	280	314 10.5kts
0200	14-55N	174-03W	" "	15	1012	82	75	80	1	0	090-6-8	82	17	280	314 10.5kts
0300	15-02N	174-09W	" "	15	1012	82	75	80	1	0	090-6-8	82	17	280	314 10.5kts
0400	15-10N	174-10W	" "	15	1012	82	75	80	2	0		82			348
0500	15-18N	174-03	" "	8	1010	82	74	76	2	0	090-6-8	82	17	080	048 10.4kts
0600	15-27N	173-53W	" "	8	1012	82	74	76	2	0	090-6-8	82	16	080	048 10.4kts
0700	15-38N	173-54W	" "	10	1012	82	74	76	2	0	090-6-7	82	15	080	048 10.4kts
0800	15-45N	173-47W	" "	15	1012	82	74	76	2	0	090-6-7	82	15	080	048 10.4kts
0900	15-40N	173-33W	" "	15	1013	83	76	80	2	2	090-6-7	82	13	090	045 9.5kts
1000	15-46N	173-26W	" "	15	1014	83	76	80	2	2	090-6-7	82	15	090	045 9.5kts
1100	15-53N	173-20W	" "	15	1014	83	76	80	3	2	090-6-7	82	15	090	045 9.5kts
1200	16-00N	173-13W	" "	15	1014	83	76	80	5	2	090-6-7	82	15	090	045 9.5kts
1300	16-05N	173-09W	" "	15	1013	84	74	73	8	5	090-6-7	82	13	090	045 9.5kts
1400	16-11N	173-02W	" "	15	1013	83	74	76	4	1	090-6-7	82	13	090	045 9.5kts
1500	16-18N	172-55W	" "	15	1012	83	74	76	5	2	090-6-7	82	13	090	045 9.5kts
1600	16-25N	172-49W	" "	15	1012	83	74	76	4	2	090-6-7	82	13	090	045 9.5kts
1700	16-26N	172-48W	" "	15	1013	83	76	80	8	5	090-6-7	82	13	090	045 9.5kts
1800	16-33N	172-41W	" "	10	1013	82	77	84	7	4	090-6-7	82	13	090	045 9.5kts
1900	16-40N	172-34W	" "	5	1014	82	77	84	8	4	090-6-7	82	15	090	045 9.5kts
2000	16-47N	172-27W	" "	5	1014	82	77	84	8	4	090-6-7	82	15	090	045 9.5kts
2100	16-53N	172-26W	Clouds	10	1015	82	77	84	10	10	090-6-8	82	15	090	045 9.5kts
2200	17-00N	172-19W	Cloudy	10	1015	82	77	84	10	10	090-6-8	82	15	090	045 9.5kts
2300	17-06N	172-12W	Cloudy	10	1015	82	77	84	10	10	090-6-8	82	17	090	045 9.5kts
2400	17-12N	172-06W	Cloudy	10	1015	82	77	84	10	10	090-6-8	82	17	090	045 9.5kts

REMARKS:

XRAY

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE 14 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17-16N	172-04W	Clky 4 rain	10	1014	80	73	79	9	9	090-6-8	82	15	100	045 9 kn
0200	17-22N	171-58W	" "	10	1014	80	73	79	9	8	090-6-8	82	15	090	003 10 kn
0300	17-31N	171-58W	" "	10	1014	80	73	79	8	7	090-6-8	82	15	090	003 10 kn
0400	17-41N	171-57W	" "	10	1013	81	73	77	8	7	090-6-8	82	16	090	003 10 kn
0500	17-51N	171-57W	" "	8	1014	80	72	75	8	7	090-6-8	82	16	090	003 10 kn
0600	18-00N	171-46W	" "	10	1016	81	74	79	8	7	090-6-8	82	16	090	003 10
0700	18-04	171-48W	" "	10	1016	81	74	79	8	7	090-6-8	82	16	090	001 10
0800	18-22N	171-48W	" "	20	1016	81	74	79	8	7	090-6-7	82	15	090	003 - 9.5
0900	18-26N	171-59W	" "	20	1016	82	74	79	8	7	090-6-7	82	15	090	003 - 9.5
1000	18-30N	171-59W	" "	20	1016	83	76	80	8	7	090-6-7	82	15	090	003 - 9.5
1100	18-39N	171-58W	" "	20	1016	83	76	80	8	7	090-6-7	82	15	090	003 - 9.5
1200	18-49N	171-58W	" "	20	1016	83	76	80	8	7	090-6-7	82	15	090	003 - 9.5
1300	18-02N	171-58W	0'cast	20	1015	82	74	76	9	7	090-6-7	82	16	100	003 10 kn
1400	19-08N	171-57W	" "	20	1015	82	74	76	9	8	090-6-7	82	13	100	003 10 kn
1500	19-18N	171-57W	" "	25	1015	82	74	76	9	8	090-6-7	82	13	100	003 10 kn
1600	19-28N	171-57W	" "	15	1015	82	74	76	9	8	090-6-7	82	13	100	003 10 kn
1700	19-39N	171-57W	Cloudy	15	1015	82	75	80	8	7	090-6-7	82	14	100	003 10
1800	19-49N	171-57W	" "	10	1015	82	75	80	8	7	090-6-7	82	14	100	003 10
1900	20-00N	171-56W	" "	8	1015	82	75	80	8	7	090-6-7	82	15	100	003 10
2000	20-08N	171-55W	" "	8	1015	82	75	80	8	7	090-6-7	82	15	100	003 10
2100	20-19N	171-56W	Fair Clky	15	1015	81	73	75	3	2	090-6-6	82	10	090	003 10 kn
2200	20-30N	171-56W	" "	15	1015	81	73	75	3	2	090-6-6	82	10	090	003 10 kn
2300	20-40N	171-55W	" "	15	1016	81	73	75	3	2	090-6-6	82	10	090	003 10 kn
2400	20-51N	171-55W	" "	15	1016	81	73	75	3	2	090-6-6	82	10	090	003 10 kn

REMARKS:

ALL TIMES LOCAL (WILSKY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE 15 Sept. 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.	
0100	21° 00' N	171° 55' W	1017	CLDY	15	1017	80	74	79	3	2	090-6-7	82	17	090	003	10 K
0200	21° 10' N	171° 55' W	1017	"	15	1017	80	74	79	2	1	090-6-7	82	17	090	003	10 K
0300	21° 20' N	171° 55' W	1017	"	15	1017	80	74	79	2	0	090-6-7	82	17	090	003	10 K
0400	21° 30' N	171° 55' W	1017	"	8	1017	80	74	79	2	0	090-6-7	82	17	090	003	10 K
0500	21-40 N	171-55 W	1017	"	8	1017	80	74	84	3	0	090-6-7	82	16	090	003	10 K
0600	21-50 N	171-55 W	1018	"	10	1018	82	74	76	3	0	090-6-7	82	16	090	003	10 K
0700	22-00 N	171-55 W	1018	"	10	1018	82	74	76	3	0	090-6-7	82	16	090	003	10 K
0800	22-10 N	171-55 W	1018	"	10	1018	82	74	76	3	0	090-6-7	82	16	090	003	10 K
0900	22-18 N	171-53 W	1018	"	20	1018	82	74	76	3	2	090-6-7	82	18	090	003	10 K
1000	22-28 N	171-53 W	1019	"	20	1019	82	74	76	3	2	090-6-7	82	18	090	003	10 K
1100	22-37 N	171-52 W	1019	"	20	1019	82	74	76	3	2	090-6-7	82	18	090	001	10 K
1200	22-47 N	171-52 W	1019	"	20	1019	82	74	76	3	2	090-6-7	82	18	090	001	10 K
1300	22-57 N	171-52 W	1018	"	20	1018	82	74	76	8	6	090-6-7	82	18	100	001	10 K
1400	23-03 N	171-52 W	1018	"	20	1018	80	73	79	7	5	090-6-7	82	15	090	001	10 K
1500	23-12 N	171-52 W	1018	"	20	1018	80	73	79	8	7	090-6-7	82	15	090	001	10 K
1600	23-22 N	171-52 W	1018	"	20	1018	80	73	79	8	6	090-6-7	81	15	090	001	10 K
1700	23-33 N	171-51 W	1018	"	20	1018	80	74	83	8	6	090-6-7	81	16	090	001	10 K
1800	23-43 N	171-50 W	1018	"	10	1018	80	74	83	9	7	090-6-7	81	16	090	001	10 K
1900	23-53 N	171-50 W	1019	"	8	1019	80	73	79	9	7	090-6-7	81	16	090	001	10 K
2000	24-03 N	171-50 W	1019	"	8	1019	80	73	79	9	7	090-6-7	81	16	090	001	10 K
2100	24-10 N	171-51 W	1019	CLDY	15	1019	80	73	79	8	7	090-6-7	81	15	090	001	10 K
2200	24-20 N	171-51 W	1020	"	15	1020	80	73	79	8	7	090-6-7	81	15	090	001	10 K
2300	24-30 N	171-50 W	1020	"	15	1020	80	73	79	8	7	090-6-7	81	15	090	001	10 K
2400	24-40 N	171-50 W	1020	"	15	1020	80	73	79	8	7	090-6-7	81	15	090	001	10 K

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE 16 Sept. 1964

NO OBSERVATIONS MADE THIS DAY - NO FIX SHEET J.D.W.

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPT.
0100	24-50N	171-50W	Clky 4/12	12	1020	80	73	78	8	7	090-6-7	80	17	090	001 10kn
0200	25-00N	171-50W	" "	7	1020	78	72	83	7	8	090-6-7	80	17	090	001 10kn
0300	25-10N	171-50W	" "	12	1020	75	72	83	7	8	090-6-7	80	17	110	001 10kn
0400	25-20N	171-49W	Clky	12	1020	78	72	83	9	8	090-6-7	80	17	110	000 10kn
0500	25-30N	171-49W	"	8	10										
0600	25-40N	171-50W	"	10											
0700			ANCHORED AT LAYSAN ISLAND												
0800															
0900															
1000															
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE 20 Sept. 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800																
0900	25°-43'N	171-45W		FEW clb												
1000	25-39N	171-36W		1022"	15	1022	82	71	69	3	2	090-5-4	82	10R	090	116 9.5
1100	25-35N	171-27W		1022"	15	1022	82	71	69	3	2	090-5-4	82	10	090	116 9.5
1200	25-31N	171-17W		1022"	15	1022	82	71	69	3	2	090-5-4	82	10	090	116 9.5
1300	25-27N	171-08W		" "	15	1020	81	70	72	2	0	090-5-4	82	8	060	116 9.5
1400	25-23N	170-59W		" "	15	1019	81	70	72	3	1	090-5-4	82	8	060	116 9.5
1500	25-18N	170-49W		" "	15	1019	81	70	72	2	0	090-5-4	82	8	060	116 9.5
1600	25-14N	170-39		" "	15	1019	81	70	72	2	0	090-5-4	81	7	060	116 9.5
1700	25-11N	170-29		" "	15	1019	80	70	75	3	1	090-5-4	81	7	060	109 9.5
1800	25-08N	170-19		Cloudy	10	1019	80	70	75	6	2	090-5-4	81	7	060	109 9.5
1900	25-08N	170-09		"	8	1019	80	70	75	6	2	090-5-4	81	7	060	109 9.5
2000	25-02N	169-59		"	8	1020	80	70	75	3	3	090-5-5	81	8	070	110 9.5
2100	25-00N	169 50		FEW clb	15	1020	80	70	75	3	3	090-5-5	81	8	070	110 9.5
2200	24-57N	169 40W		"	15	1020	80	70	75	3	3	090-5-5	81	8	070	110 9.5
2300	24 53N	169-30W		"	15	1020	80	70	75	3	3	090-5-5	81	8	070	110 9.5
2400	24-50N	169-20W		"	15	1020	80	70	75	3	3	090-5-5	81	8	070	110 9.5

REMARKS:

XRAY

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE 21 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	24-46 N	169-07 W	PH. 11/16	15	1018	79	70	75	8	6	090-5-4	81	8	050	109 10 K
0200	24-42 N	168-55 W	" "	15	1018	79	70	75	7	6	090-5-4	81	8	050	109 10 K
0300	24-39 N	168-45 W	" "	15	1017	79	70	75	7	7	090-5-4	81	7	045	109 10 K
0400	24-34 N	168-34 W	O'cast	15	1017	77	70	75	9	5	090-5-4	81	7	050	109 10 K
0500	24-32 N	168-26 W	PRly Cloudy	8	1020	79	73	79	4	2	090-5-4	81	7	030	110 10 K
0600	24-28 N	168-15 W	" "	10	1020	79	73	79	4	2	090-5-4	81	7	030	110 10 K
0700	24-25 N	168-06 W	" "	15	1020	79	73	79	4	0	090-5-4	81	7	050	110 10 K
0800	24-21 N	167-52 W	Cloudy	10	1018	80	73	79	8	8	045-6-5	80	10	030	112 10 K
0900	24-18 N	167-41 W	"	10	1018	80	73	79	8	8	045-6-5	80	10	030	112 10 K
1000	24-14 N	167-31 W	"	10	1017	80	73	79	8	8	045-6-5	80	10	030	112 10 K
1100	24-10 N	167-21 W	"	10	1017	80	73	79	8	8	045-6-5	80	10	030	112 10 K
1200	24-06 N	167-10 W	"	10	1017	80	73	79	8	8	045-6-5	80	10	030	112 10 K
1300	24-02 N	167-01 W	"	10	1015	80	73	79	7	5	045-6-5	80	10	040	112 10 K
1400	24-00 N	166-52 W	"	15	1014	80	73	79	5	3	045-6-5	80	5	040	112 10 K
1500	23-56 N	166-42 W	"	15	1014	80	73	79	5	6	045-6-5	80	5	030	112 9 K
1600	23-45 N	166-31 W	"	15	1010	80	73	79	8	6	045-6-5	80	5	030	112 9 K
1700	23-42 N	166-25 W	Cloudy	15	1014	82	77	84	8	3	045-6-5	80	5	000	137 10 K
1800	23-35 N	166-17 W	"	15	1014	82	77	84	8	3	045-6-5	81	5	000	137 10 K
1900	23-31 N	166-07 W	"	10	1014	80	74	83	9	3	045-6-5	80	5	045	111 10 K
2000	23-27 N	165-56 W	"	8	1014	80	74	82	9	2	045-6-5	80	5	045	111 10 K
2100	23-22 N	165-46 W	O'cast	10	1014	77	73	83	9	2	090-6-5	80	10	090	111 10 K
2200	23-18 N	165-36 W	W/TH	10	1014	77	73	87	7	2	090-6-5	80	10	090	111 10 K
2300	23-15 N	165-26 W	Squalls	10	1014	77	73	87	9	2	090-6-5	80	10	120	111 10 K
2400	23-11 N	165-16 W	"	10	1014	77	73	87	9	2	090-6-5	80	10	120	111 10 K

REMARKS:

\* Rain Squalls 215.

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE 22 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	23-10 N	165-06 W	Cldy	12	1014	77	74	87	9	7	090-6-3	80	7	170	111 10 kn
0200	23-06 N	164-56 W	Cldy	10	1014	77	74	87	9	8	090-6-3	80	7	170	111 9.5 kn
0300	23-02 N	164-46 W	" "	12	1014	78	72	83	9	7	090-6-5	80	8	140	113 9.5 kn
0400	22-58 N	164-36 W	Cldy	12	1014	78	72	83	8	7	090-6-5	80	8	170	113 9.5 kn
0500	22-54 N	164-26 W	"	8	1014	79	70	75	6	7	090-6-4	80	8	110	112 9.5 kn
0600	22-51 N	164-17 W	"	8	1014	79	70	75	6	0	090-6-4	80	8	110	112 9.5 kn
0700	22-47 N	164-07 W	PARTLY	15	1014	80	73	79	5	0	090-6-4	80	8	110	112 9.8 kn
0800	22-44 N	163-57 W	"	15	1014	80	73	79	4	0	090-6-4	80	8	110	112 9.8 kn
0900	22-40 N	163-45 W	"	15	1015	81	73	79	3	2	090-6-5	80	10	140	112 10 kn
1000	22-36 N	163-35 W	"	15	1015	81	73	79	3	2	090-6-5	80	10	140	112 10 kn
1100	22-32 N	163-25 W	"	15	1015	81	73	79	3	2	090-6-5	80	10	140	112 10 kn
1200	22-28 N	163-14 W	"	15	1015	81	73	79	3	2	090-6-5	80	10	140	112 10 kn
1300	22-25 N	163-05 W	"	20	1015	83	71	66	3	2	090-6-5	80	7	130	111 9 kn
1400	22-22 N	162-56 W	"	20	1014	85	74	67	3	1	090-6-5	80	Variable		111 9 kn
1500	22-18 N	162-48 W	"	20	1013	85	74	67	3	1	090-6-5	80	"		111 9 kn
1600	22-15 N	162-39 W	"	20	1013	85	74	67	4	4	090-2-6	81	"		111 9 kn
1700	22-12 N	162-29 W	"	20	1013	82	72	75	6	5	090-2-6	80	4	070	111 9 kn
1800	22-08 N	162-20 W	"	20	1014	80	73	79	6	5	090-2-6	80	4	070	111 9 kn
1900	22-05 N	162-11 W	"	8	1014	80	73	79	0	0	090-5-6	80	3	—	111 9 kn
2000	22-03 N	162-02 W	"	8	1014	80	73	79	0	0	090-5-6	80	3	—	111 9 kn
2100	21-58 N	161-52 W		15	1015	80	73	79	0	0	090-5-6	80	3	—	111 9 kn
2200	21-55 N	161-44 W		15	1015	80	73	79	0	0	090-5-6	80	3	—	111 9 kn
2300	21-52 N	161-34 W		15	1015	80	73	79	0	0	090-5-6	80	3	—	111 9 kn
2400	21-50 N	161-29 W		15	1015	80	73	79	0	0	090-5-6	80	3	—	111 9 kn

REMARKS:

CRAY

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE 23 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	21-47 N	161-21 W	PHg CLd	15	1013	78	71	79	1	0	090-5-3	80	Cal m	111	8 kn
0200	21-45 N	161-15 W	" "	15	1013	78	71	79	1	0	090-5-3	80	Cal m	111	8 kn
0300	21-42 N	161-07 W	" "	15	1013	78	71	79	1	0	090-5-3	80	Cal m	111	8 kn
0400	21-39 N	160-59	" "	15	1013	78	71	79	1	0	090-5-3	81	Cal m	111	8 kn
0500	21-36 N	160-51 W	" "	8	1013	79	73	83	10	9	090-5-4	81	5	110	8 kn
0600	21-33 N	160-43 W	" "	8	1014	80	73	83	10	9	090-5-3	81	5	110	8 kn
0700	21-30 N	160-35 W	O'cast	10	1014	80	73	82	10	9	090-5-3	81	5	110	8 kn
0800	21-28 N	160-26 W	"	10	1014	80	73	82	10	9	090-5-3	81	5	110	8 kn
0900	21-28 N	160-18 W	"	10	1014	80	73	82	10	9	090-5-3	81	5	110	8 kn
1000	21-27 N	160-09 W	"	10	1014	80	73	82	10	9	090-5-3	81	5	110	8 kn
1100	21-27 N	159-59 W	"	10	1014	80	73	83	10	9	090-5-3	81	5	110	8 kn
1200	21-26 N	159-51 W	"	10	1014	80	73	83	10	9	090-5-3	81	5	110	8 kn
1300	21-25 N	159-44 W	"	15	1013	82	74	76	9	7	090-5-3	81	6	130	6.0 kn
1400	21-25 N	159-38 W	"	15	1013	82	74	76	9	7	090-5-3	81	10	135	6.0 kn
1500	21-25 N	159-32 W	"	15	1012	82	74	76	9	7	090-5-3	81	10	150	6.0 kn
1600	21-24 N	159-26 W	"	15	1012	82	74	76	8	6	090-5-3	81	10	140	6.0 kn
1700	21-23 N	159-21 W	"	15	1012	80	74	83	9	6	090-5-3	80	10	140	6.0
1800	21-22 N	159-16 W	"	15	1012	80	74	83	9	6	090-5-3	80	11	140	6.0
1900	21-22 N	159-08 W	"	8	1012	78	73	83	9	5	090-5-3	80	11	140	6.0
2000	21-20 N	159-02 W	"	8	1013	80	73	79	9	5	090-5-3	80	11	140	6.0
2100	21-20 N	158-55 W	FW CLd	15	1013	80	73	79	3	2	090-5-3	80	3	110	6 kn
2200	21-19 N	158-48 W	"	15	1013	80	73	79	3	2	090-5-3	80	3	110	6 kn
2300	21-18 N	158-43 W	"	15	1013	80	73	79	3	2	090-5-3	80	3	110	6 kn
2400	21-17 N	158-37 W	"	15	1013	80	73	79	3	2	090-5-3	80	3	110	6 kn

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE 4 Sept.

Time at ~~sunrise~~ <sup>HARBOR 0900</sup> = \_\_\_\_\_ Position at ~~sunrise~~ = \_\_\_\_\_

Time at sunset 18 = 51 Position at sunset = 20-47N 159-20W

Miles traveled from 0000 hours to sunrise = \_\_\_\_\_

Miles traveled from ~~sunrise~~ <sup>HARBOR</sup> to sunset = 99

Miles traveled from sunset to 2400 hours = 57

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	<u>1400</u>	<u>Loran C</u>	<u>158-39W</u>	<u>20-58N</u>
2.	<u>1807</u>	<u>LOZAN</u>	<u>159-23</u>	<u>20-46</u>
3.				
4.				
5.				
6.				

DATE 5 Sept. 1964

Time at sunrise = 0530 Position at sunrise = 19-59N 161-28W

Time at sunset = 1803 Position at sunset = 19-10 163-18

Miles traveled from 0000 hours to sunrise = 42.7

Miles traveled from sunrise to sunset = 126

Miles traveled from sunset to 2400 hours = 60

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	<u>0100</u>	<u>Loran</u>	<u>160-31W</u>	<u>20-20N</u>
2.	<u>0430</u>	<u>LOZAN</u>	<u>161-14W</u>	<u>20-03N</u>
3.	<u>0800</u>	<u>LOZAN/2 Star</u>	<u>161°41'W</u>	<u>19°51'N</u>
4.	<u>1200</u>	<u>" "</u>	<u>162-22W</u>	<u>19°35'N</u>
5.	<u>1500</u>	<u>" "</u>	<u>162-48W</u>	<u>19-23'N</u>
6.				



DATE 6 Sept. 1964

Time at sunrise = 0547 Position at sunrise = 18-27N 165-08 W

Time at sunset = 1818 Position at sunset = 17-26N 167-25 W

Miles traveled from 0000 hours to sunrise = 57

Miles traveled from sunrise to sunset = 121

Miles traveled from sunset to 2400 hours = 57

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0000	Loran	164-15 W	18-51 N
2.	0709	LORAN	165-25 W	18-17 N
3.	1300	Loran & sun	166-25 W	17-51 N
4.	2000	"	167-38 W	17-21 N
5.	0420	LORAN & $\phi$	168-57 W	16-49 N
6.				

DATE 7 Sept. 1964

Time at sunrise = 0606 Position at sunrise = 16-43 N. 169-12 W

Time at sunset = 1823 Position at sunset = 15-04 N 169-04

Miles traveled from 0000 hours to sunrise = 58

Miles traveled from sunrise to sunset = 106

Miles traveled from sunset to 2400 hours = 59

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0112	Loran	168-29 W	17-02 N
2.	0420	LORAN & $\phi$	168-57 W	16-49 N
3.	0800	LAND	169-30 W	16-40 N
4.	1200 -	LORAN & Sun	169-18 W	16-01 N
5.	1500 -	"	169-13 W	15-32 N
6.	2100 -	LORAN	168-52 W	14-38 N
	2230 -	"	169-09 W	14-15 N



DATE 8 Sept. 1964

Time at sunrise = 0605 Position at sunrise = 13-32N 169-50W

Time at sunset = 1832 Position at sunset = 12-10N 171-21W

Miles traveled from 0000 hours to sunrise = 61

Miles traveled from sunrise to sunset = 128

Miles traveled from sunset to 2400 hours = 61

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0000			
2.	0803	Sun & LORAN	169-59W	12-23N
3.	1107	" "	170-20W	12-57N
4.	1606	Sun	171-02W	12-61N
5.	0540	STARS	170-57W	13-33N
6.	0			

DATE 9 Sept. 1964

Time at sunrise = 0612 Position at sunrise = 13-35N 170-57

Time at sunset = 1823 Position at sunset = 14-57N 169-30

Miles traveled from 0000 hours to sunrise = 60 MI

Miles traveled from sunrise to sunset = 120

Miles traveled from sunset to 2400 hours = 62

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				<del>13-3</del>
2.	0800	LORAN & Sun	170-45W	13-43N
3.	1206	" "	170-18W	14-12N
4.	1300	" "	170-02W	14-26N
5.	1840		169-24W	15-01N
6.	2200	"	169-46W	15-25N



DATE

10 Sept. 1964

Time at sunrise = 0612 Position at sunrise = 14-50N 170-52W

Time at sunset = 1834 Position at sunset = 13-51N 172-24W

Miles traveled from 0000 hours to sunrise = 66 mi

Miles traveled from sunrise to sunset = 126 mi

Miles traveled from sunset to 2400 hours = 65

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0000	Loran	170°03' W	15°35' N
2.	0600	Stars	170-52 W.	14-49 N
3.	1200	Sun, Loran	171-31 W	14-08 N
4.	1500	" "	171-56 W	13-48 N
5.	0653	Sun	172-20	14-33 N
6.				

DATE

11 Sept. 1964Time at sunrise ~~0612~~ <sup>0612</sup> 1436 Position at sunrise = 14-30N 172-19W

Time at sunset = 1829 Position at sunset = 15-47N 171-05

Miles traveled from 0000 hours to sunrise = 57 mi

Miles traveled from sunrise to sunset = ~~136 mi~~ <sup>101 mi</sup>

Miles traveled from sunset to 2400 hours = 48

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	Loran & Sun	171°-00' W	14°-38' N
2.	1100	" "	171-54 W	14-57 N
3.	2000	" "	170-59 W	15-56 N
4.				
5.				
6.				



DATE 12 Sept 1964

Time at sunrise = 0624 Position at sunrise = 16-19 N 171-43 W  
 Time at sunset = 1834 Position at sunset = 15-27 N 173-06 W  
 Miles traveled from 0000 hours to sunrise = 72 M  
 Miles traveled from sunrise to sunset = 108 Mi  
 Miles traveled from sunset to 2400 hours = 59 M

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0554	STARS	171-42 W	16-20 N
2.	0800	LOREAN + SUN	171-49 W	16-17 N
3.	0930	" "	172-00 W	16-10 N
4.	1300	" "	172-22 W	15-48 N
5.	2000	"	173-17 W	14-55 N
6.	0550	STARS	173-55 W	15-27 N

DATE 13 Sept. 1964

Time at sunrise = 0623 Position at sunrise = 15-28 N 173-52 W  
 Time at sunset = 1834 Position at sunset = 16-37 N 172-37 W  
 Miles traveled from 0000 hours to sunrise = 66  
 Miles traveled from sunrise to sunset = 107 Mi  
 Miles traveled from sunset to 2400 hours = 48 mi

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	LOREAN + SUN	173-40 W	15-32 N
2.	1115	"	173-22 W	15-52 N
3.	2000	LOREAN	172-32 W	16-46 N
4.	2300	"	172-12 W	17-06 N
5.				
6.				



DATE 14 Sept 1964

Time at sunrise = 0616 Position at sunrise = 18-04N 171-57W

Time at sunset = 1830 Position at sunset = 19-55N 171-56W

Miles traveled from 0000 hours to sunrise = 61 MI.

Miles traveled from sunrise to sunset = 112 MI.

Miles traveled from sunset to 2400 hours = 57

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0200	LORAN	171°58'W	17°22'N
2.	<del>0555</del> 0617 <sup>ALOS</sup>	STAR & LORAN	171-46W	18-02N
3.	0800 -	LORAN & SUN	172-00W	18-10N
4.	1000 -	" "	171-58W	18-30N
5.	1200	" "	171-58W	18-49N
6.	1850	STAR	171-55W	20-08N

DATE 15 Sept. 1964

Time at sunrise = 0614 Position at sunrise = 21-52N 171-55W

Time at sunset = 1831 Position at sunset = 23-48N 171-50W

Miles traveled from 0000 hours to sunrise = 62 MI

Miles traveled from sunrise to sunset = 116 MI.

Miles traveled from sunset to 2400 hours = 63 miles

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0542	STARS	171-49W	21-43N
2.	0800	LORAN & SUN	171-53W	22-08N
3.	1030	" "	171-52W	22-47N
4.	1400	" "	171-52W	23-03N
5.	2000	"	171-51W	24°00'N
6.				



DATE 20 Sept 1964

Time at sunrise = ~~0830~~ 0830 Position at sunrise = 25-46 171-45W  
Time at sunset = 1717 Position at sunset = 25-07N 170-15W  
Miles traveled from 0000 hours to sunrise = 00  
Miles traveled from ~~sunrise~~ to sunset = 95  
Miles traveled from sunset to 2400 hours = 53

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1200	LORAN C Sun	171-17W	25-31N
2.				
3.				
4.				
5.				
6.				

DATE 21 SEPT 1964

Time at sunrise = 0602 Position at sunrise = 24-25N 168-15W  
Time at sunset = 1801 Position at sunset = 23-35N 166-17W  
Miles traveled from 0000 hours to sunrise = 62.171  
Miles traveled from sunrise to sunset = 124.171  
Miles traveled from sunset to 2400 hours = ~~53~~ 60 MILES

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0528		168-17W	24-26N
2.	0800	LORAN C Sun	167-52W	24-21N
3.	1600	LAND FIX	166-30W	23-49N
4.	2000	LORAN C	165-56W	23-26N
5.				
6.				



DATE 22 Sept. 1964

Time at sunrise = 0546 Position at sunrise = 22-51 N 164-19 W  
Time at sunset = 1745 Position at sunset = 22-09 N 162-23 W  
Miles traveled from 0000 hours to sunrise = 58  
Miles traveled from sunrise to sunset = 115 NM. 114 M.  
Miles traveled from sunset to 2400 hours = 54 MILES.

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0516	STARS	164-24 W	22-54 N.
2.	0800	LORAN	163-55 W	22-44 N
3.	1100	"	163-25 W	22-32 N
4.	1655	LORAN	162-30 W	22-12 N
5.	2000	"	162-02 W	22-03 N
6.				

DATE 23 Sept 1964

Time at sunrise = 0632 Position at sunrise = 21-31 N 160-40.  
Time at sunset = 1833 Position at sunset = 21-24 N 159-12  
Miles traveled from 0000 hours to sunrise = 49 MI.  
Miles traveled from sunrise to sunset = 84 MI  
Miles traveled from sunset to 2400 hours = 34 MI

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0220	LORAN	161° 13' W	21° 44' N
2.	0800	LORAN	160-26 W	21° 28' N
3.	1100	"	159-59 W	21° 26' N
4.	2000	"	159-01 W	21-20 N
5.	2200	"	158-48 W	21-19 N
6.				



C

OUT OF GRID

SI-MNH-255a  
3-4-64SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART ADATE: 14 SEPTEMBER 64 Total Minutes: 734 Total Miles 112

## 1. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>125</u>	<u>312</u>	<u>2.49</u>	<u>2.785</u>

## II. Abundance of the Shearwater-Petrel-Albatross Group:

SHEAR-PET.

39				130				333				1.16			
No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>107</u>	<u>40</u>	<u>16</u>	<u>12</u>	<u>22</u>	<u>61</u>	<u>18</u>	<u>12</u>	<u>206</u>	<u>152</u>	<u>112</u>	<u>10</u>	<u>1.93</u>	<u>.55</u>	<u>.16</u>	<u>.167</u>

## III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>5</u>	<u>3</u>	<u>2</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>.047</u>	<u>.028</u>	<u>.018</u>

## IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>13</u>	<u>56</u>	<u>4.31</u>	<u>0.768</u>

## V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

## VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

## VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

## VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>8</u>	<u>149</u>	<u>0.0715</u>	<u>0</u>	<u>0</u>	<u>0</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 15 SEPTEMBER 64 Total Minutes: 737 Total Miles 116

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>254</u>	<u>2770</u>	<u>10.90</u>	<u>23.28</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

SHEAR-PET

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B

<u>216</u>	<u>115</u>	<u>16</u>	<u>26</u>	<u>1294</u>	<u>470</u>	<u>19</u>	<u>32</u>	<u>6.50</u>	<u>4.09</u>	<u>1.18</u>	<u>1.23</u>	<u>15.47</u>	<u>4.05</u>	<u>1.6</u>	<u>276</u>
------------	------------	-----------	-----------	-------------	------------	-----------	-----------	-------------	-------------	-------------	-------------	--------------	-------------	------------	------------

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1.0</u>	<u>0.0</u>	<u>1.0</u>	<u>0.1086</u>		
----------	----------	----------	----------	----------	----------	------------	------------	------------	---------------	--	--

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
---------------	-----------	----------------	------------

<u>36</u>	<u>973</u>	<u>27.02</u>	<u>8.388</u>
-----------	------------	--------------	--------------

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
---------------	-----------	----------------	------------

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
----------	----------	----------	----------

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
---------------	-----------	----------------	------------

<u>1</u>	<u>2</u>	<u>2</u>	<u>0.017</u>
----------	----------	----------	--------------

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
------------------	-----------------	-----------------	--------------------	-------------------	-------------------

<u>49</u>	<u>2325</u>	<u>43</u>	<u>1</u>	<u>25</u>	<u>0.0026</u>
-----------	-------------	-----------	----------	-----------	---------------



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 20 SEPTEMBER 64 Total Minutes: 553 Total Miles 95

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>142</u>	<u>774</u>	<u>5.45</u>	<u>8.47</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

Shear-Pet.

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>90</u>	<u>52</u>	<u>19</u>	<u>14</u>	<u>323</u>	<u>274</u>	<u>23</u>	<u>19</u>	<u>3.58</u>	<u>5.27</u>	<u>1.21</u>	<u>1.35</u>	<u>3.46</u>	<u>5.73</u>	<u>1.41</u>	<u>1.20</u>

III. Abundance of Tropicbirds:

(1 Tropicbird)

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>1</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>1.0</u>	<u>1.0</u>	<u>0.0</u>	<u>.021</u>	<u>.011</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>24</u>	<u>73</u>	<u>3.04</u>	<u>0.769</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>2</u>	<u>2.0</u>	<u>0.021</u>

VI. Abundance of Boobys:

(1 Booby)

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>6</u>	<u>1</u>	<u>3</u>	<u>0</u>	<u>7</u>	<u>1</u>	<u>3</u>	<u>0</u>	<u>1.16</u>	<u>1.0</u>	<u>1.0</u>	<u>0.04</u>	<u>.011</u>	<u>.032</u>	<u>0</u>	

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>9</u>	<u>367</u>	<u>40.77</u>	<u>3.86</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>2</u>	<u>153</u>	<u>0.052</u>	<u>1</u>	<u>11</u>	<u>.011</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 21 SEPTEMBER 64 Total Minutes: 719 Total Miles 124

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>124</u>	<u>828</u>	<u>6.67</u>	<u>7.48</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

*SWEEP-PET* 9 15 1.66 .121

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B

63 44 8 2 503 476 10 2 7.98 10.81 1.25 1.0 4.06 3.44 .08 .017

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

2 1 1 2 1 1 1.0 1.0 1.0 .017 .0017 .0017

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>26</u>	<u>270</u>	<u>10.38</u>	<u>2.19</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.0</u>	<u>0.0081</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

13 4 5 1 21 6 10 1 1.61 1.50 1.20 1.0 .17 .052 .02 .0081

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>19</u>	<u>31</u>	<u>1.63</u>	<u>.24</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>12</u>	<u>818</u>	<u>0.109</u>	<u>9</u>	<u>789</u>	<u>.072</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 22 SEPTEMBER 64 Total Minutes: 719 Total Miles 114

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>123</u>	<u>680</u>	<u>5.52</u>	<u>5.96</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

*Shear-Pet.*

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>93</u>	<u>29</u>	<u>8</u>	<u>29</u>	<u>586</u>	<u>509</u>	<u>10</u>	<u>35</u>	<u>6.30</u>	<u>17.55</u>	<u>1.25</u>	<u>1.20</u>	<u>5.14</u>	<u>4.46</u>	<u>.088</u>	<u>.307</u>

III. Abundance of Tropicbirds: *(3-TROPICBIRDS SP.)*

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>7</u>	<u>3</u>	<u>2</u>	<u>8</u>	<u>3</u>	<u>2</u>	<u>1.14</u>	<u>1.0</u>	<u>1.0</u>	<u>.07</u>	<u>.026</u>	<u>.0176</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>14</u>	<u>74</u>	<u>5.28</u>	<u>0.65</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>6</u>	<u>6</u>	<u>1.0</u>	<u>0.053</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1.0</u>	<u>0.0</u>	<u>1.0</u>	<u>0.0</u>	<u>1.000</u>	<u>0</u>	<u>.000</u>	<u>0</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>4</u>	<u>2.0</u>	<u>0.0352</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>4</u>	<u>536</u>	<u>0.0352</u>	<u>3</u>	<u>526</u>	<u>0.0264</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 23 SEPTEMBER 64 Total Minutes: 721 Total Miles 84

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>174</u>	<u>306</u>	<u>1.75</u>	<u>3.64</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

SHEAR-PET.

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>124</u>	<u>50</u>	<u>1</u>	<u>4</u>	<u>175</u>	<u>54</u>	<u>1</u>	<u>4</u>	<u>1.41</u>	<u>1.08</u>	<u>1.0</u>	<u>1.0</u>	<u>3.02</u>	<u>.64</u>	<u>.012</u>	<u>.048</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1.0</u>	<u>0</u>	<u>1.0</u>	<u>.012</u>	<u>0</u>	<u>.012</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>33</u>	<u>103</u>	<u>3.12</u>	<u>1.23</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0.0</u>	<u>0.000</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>15</u>	<u>2</u>	<u>7</u>	<u>5</u>	<u>26</u>	<u>9</u>	<u>7</u>	<u>7</u>	<u>1.73</u>	<u>4.50</u>	<u>1.0</u>	<u>1.40</u>	<u>.31</u>	<u>.107</u>	<u>.083</u>	<u>.083</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.0</u>	<u>.012</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>1</u>	<u>52</u>	<u>.012</u>	<u>1</u>	<u>52</u>	<u>.012</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 4 SEPTEMBER 64 Total Minutes: 591 Total Miles 99

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>104</u>	<u>759</u>	<u>7.29</u>	<u>7.592</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

SHEAR-PET 17 18 1.05

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>85</u>	<u>68</u>	<u>0</u>	<u>0</u>	<u>732</u>	<u>714</u>	<u>0</u>	<u>0</u>	<u>8.61</u>	<u>10.50</u>	<u>0</u>	<u>0</u>	<u>7.32</u>	<u>7.14</u>	<u>0</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>5</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>.05</u>	<u>.02</u>	<u>.03</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>11</u>	<u>18</u>	<u>1.63</u>	<u>.18</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>2</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>1.50</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>.03</u>	<u>0</u>	<u>.01</u>	<u>.02</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>3</u>	<u>639</u>	<u>.03</u>	<u>1</u>	<u>600</u>	<u>.01</u>



A

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 5 SEPTEMBER 64 Total Minutes: 153 Total Miles 12.6

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>142</u>	<u>250</u>	<u>1.76</u>	<u>2</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

SHEAR-PET.

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>122</u>	<u>50</u>	<u>1</u>	<u>14</u>	<u>200</u>	<u>118</u>	<u>1</u>	<u>14</u>	<u>1.63</u>	<u>2.36</u>	<u>1.0</u>	<u>1.0</u>	<u>1.6</u>	<u>.97</u>	<u>.002</u>	<u>.11</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>3</u>	<u>3</u>	<u>0</u>	<u>3</u>	<u>3</u>	<u>0</u>	<u>1.0</u>	<u>1.0</u>	<u>0</u>	<u>.024</u>	<u>.024</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>7</u>	<u>35</u>	<u>5.0</u>	<u>0.24</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>4</u>	<u>1</u>	<u>3</u>	<u>0</u>	<u>4</u>	<u>1</u>	<u>3</u>	<u>0</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>0</u>	<u>.03</u>	<u>.002</u>	<u>.024</u>	<u>0</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>6</u>	<u>8</u>	<u>1.33</u>	<u>0.9635</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>4</u>	<u>77</u>	<u>0.03</u>	<u>0</u>	<u>0</u>	<u>0</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 6 SEPTEMBER 64 Total Minutes: 738 Total Miles 121

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>81</u>	<u>157</u>	<u>1.93</u>	<u>1.3</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>56</u>	<u>28</u>	<u>6</u>	<u>13</u>	<u>87</u>	<u>54</u>	<u>6</u>	<u>17</u>	<u>1.55</u>	<u>1.92</u>	<u>1</u>	<u>1.30</u>	<u>.72</u>	<u>.45</u>	<u>.05</u>	<u>.14</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>1</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>.016</u>	<u>.008</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>15</u>	<u>120</u>	<u>8.0</u>	<u>1.0</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>3</u>	<u>3</u>	<u>1</u>	<u>0.024</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>2</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>.016</u>	<u>0</u>	<u>.016</u>	<u>0</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>2</u>	<u>1</u>	<u>.016</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>7</u>	<u>128</u>	<u>.058</u>	<u>2</u>	<u>81</u>	<u>.016</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 7 SEPTEMBER 64

Total Minutes: 114

Total Miles 17

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
36	47	1.306	2.765

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
17	17	0	0	17	17	0	0	1	1	0	0	1	1	0	0

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
0	0	0	0	0	0	0	0	0	0	0	0

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
10	16	1.60	.94

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0	0	0	0

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
1	0	0	1	1	0	0	1	1	0	0	1	.06	0	0	.06

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
7	10	1.428	0.6

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
0	0	0	0	0	0



SI-MNH-955a  
3-4-64SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART ADATE: 7 SEPTEMBER 64 Total Minutes: 618 Total Miles 98

## 1. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
58	114	1.96	1.16

## II. Abundance of the Shearwater-Petrel-Albatross Group:

SHEAR-PET.

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
36	29	2	4	44	35	2	4	1.22	1.25	1	1	.45	.36	.02	.01

III. Abundance of Tropicbirds: *1 Tropicbird sp. .01*

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
3	2	0	3	2	0	1	1	0	.05	.02	0

## IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
14	54	3.85	5.5

## V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	7	7	.071

## VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	3	3	0.03

## VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
3	12	.43	0	0	0



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 8 SEPTEMBER 64 Total Minutes: 744 Total Miles 12.8

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>46</u>	<u>153</u>	<u>3.326</u>	<u>1.2</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

*Shearwater-Petrel*

7				7				1							
No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>36</u>	<u>9</u>	<u>17</u>	<u>3</u>	<u>50</u>	<u>14</u>	<u>26</u>	<u>3</u>	<u>1.38</u>	<u>1.55</u>	<u>1.52</u>	<u>1</u>	<u>.40</u>	<u>.11</u>	<u>.20</u>	<u>.024</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>1</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>.03</u>	<u>.015</u>	<u>.015</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>6</u>	<u>99</u>	<u>16.50</u>	<u>0.7</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>2</u>	<u>107</u>	<u>.015</u>	<u>0</u>	<u>0</u>	<u>0</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 9 SEPTEMBER 64 Total Minutes: 731 Total Miles 120

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>157</u>	<u>230</u>	<u>1.46</u>	<u>1.90</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

SHEAR-PET.

105				164											
No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>142</u>	<u>4</u>	<u>24</u>	<u>9</u>	<u>205</u>	<u>4</u>	<u>25</u>	<u>10</u>	<u>1.42</u>	<u>1</u>	<u>1.04</u>	<u>1.11</u>	<u>1.70</u>	<u>.03</u>	<u>.208</u>	<u>.043</u>

III. Abundance of Tropicbirds: 1 - Tropicbird sp.

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>3</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>.0245</u>	<u>.008</u>	<u>.008</u>

IV. Abundance of Terns: 1 - Tern sp.

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>11</u>	<u>23</u>	<u>2.09</u>	<u>.19</u>

V. Abundance of Shorebirds:

SAH4

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>2</u>	<u>10</u>	<u>0.083</u>	<u>0</u>	<u>0</u>	<u>0</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 10 SEPTEMBER 64 Total Minutes: 744 Total Miles 12.6

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>316</u>	<u>542</u>	<u>1.399</u>	<u>4.30</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

SHEAR-PET

252				453				1.77				3.60			
No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>306</u>	<u>11</u>	<u>38</u>	<u>5</u>	<u>511</u>	<u>14</u>	<u>39</u>	<u>5</u>	<u>1.66</u>	<u>1.27</u>	<u>1.02</u>	<u>1</u>	<u>4.06</u>	<u>.11</u>	<u>.31</u>	<u>.44</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>2</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>.015</u>	<u>.015</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>8</u>	<u>29</u>	<u>3.62</u>	<u>.23</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>2</u>	<u>40</u>	<u>.015</u>	<u>0</u>	<u>0</u>	<u>0</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 11 SEPTEMBER 64 Total Minutes: 737 Total Miles 101

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>237</u>	<u>385</u>	<u>1.61</u>	<u>3.85</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

*SHEARWATER-PETREL*      *191*      *317*      *1.75*

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>232</u>	<u>14</u>	<u>34</u>	<u>3</u>	<u>377</u>	<u>17</u>	<u>40</u>	<u>3</u>	<u>162</u>	<u>121</u>	<u>117</u>	<u>1</u>	<u>3.77</u>	<u>1.7</u>	<u>4.0</u>	<u>.03</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>5</u>	<u>9</u>	<u>1.80</u>	<u>0.09</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>1</u>	<u>6</u>	<u>0.01</u>	<u>0</u>	<u>0</u>	<u>0</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 12 SEPTEMBER 64 Total Minutes: 742 Total Miles 108

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>109</u>	<u>616</u>	<u>5.65</u>	<u>5.70</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

SHEAR-PET

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>89</u>	<u>29</u>	<u>16</u>	<u>4</u>	<u>377</u>	<u>155</u>	<u>25</u>	<u>4</u>	<u>4.23</u>	<u>5.34</u>	<u>1.56</u>	<u>1.0</u>	<u>3.5</u>	<u>1.8</u>	<u>.33</u>	<u>.037</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>4</u>	<u>3</u>	<u>1</u>	<u>4</u>	<u>3</u>	<u>1</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>.027</u>	<u>.027</u>	<u>.009</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>12</u>	<u>231</u>	<u>19.25</u>	<u>2.14</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>3</u>	<u>3</u>	<u>1.0</u>	<u>0.027</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.0</u>	<u>0.04</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>12</u>	<u>129</u>	<u>.113</u>	<u>2</u>	<u>268</u>	<u>0.018</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 13 SEPTEMBER 64 Total Minutes: 731 Total Miles 107

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>123</u>	<u>182</u>	<u>1.48</u>	<u>1.70</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

SHEAR-PET.

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>104</u>	<u>16</u>	<u>9</u>	<u>3</u>	<u>182</u>	<u>156</u>	<u>10</u>	<u>3</u>	<u>1.75</u>	<u>9.75</u>	<u>1.11</u>	<u>1.0</u>	<u>1.46</u>	<u>.15</u>	<u>.092</u>	<u>.029</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>4</u>	<u>4</u>	<u>0</u>	<u>4</u>	<u>4</u>	<u>0</u>	<u>1.0</u>	<u>1.0</u>	<u>0</u>	<u>.037</u>	<u>.037</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>15</u>	<u>22</u>	<u>1.46</u>	<u>0.2056</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>1</u>	<u>8</u>	<u>0.0093</u>	<u>0</u>	<u>0</u>	<u>0</u>



DATE 4 Sept. 64

Bar

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800																
0900	LEAVE - HONOLULU HARBOR -					71017										
1000	21° 15' N	157° 56' W	Few Clouds		20	3002	83	72	65	4	4	090-5-6	80	22	090	245-10.5 KTS
1100	21° 11' N	158° 07' W	"		20	3002	83	72	65	4	4	090-5-6	80	22	090	247-10.5 KTS
1200	21-07N	158° 16' W	"		20	3002	83	72	65	4	4	090-5-6	80	22	090	247-10.5 KTS
1300	21-03N	158° 28' W	"		20	1016	83	75	80	2	0	090-5-6	80	17	090	247-11.5 KTS
1400	20-58N	158-39W	"		20	1014	82	75	80	1	0	120-6-6	80	15	100	247-11.0 KTS
1500	20-55N	158-55W	"		20	1013	82	75	80	1	0	120-6-6	80	13	100	247-11.2 KTS
1600	20-51N	159-01W	"		20	1013	82	75	80	1	0	120-6-6	81	12	100	247-11.0 KTS
1700	20-49N	159-12W	"		20	1014	82	75	80	1	0	120-6-6	81	12	100	245-11.0 KTS
1800	20-46N	159-23W	"		20	1014	86	75	80	1	1	120-6-6	81	12	100	245-11.0 KTS
1900	20-42N	159-33W	"		15	1014	86	75	79	1	1	120-6-6	81	10	100	245-11.0 KTS
2000	20-38N	159-44W	"		20	1013	82	75	76	3	2	120-5-5	81	10	100	247-11 KTS
2100	20-36N	159-51W	"		20	1013	80	75	79	3	2	120-5-5	81	10	100	247-11 KTS
2200	20-34N	160-08W	"		20	1013	80	75	79	3	1	120-5-5	81	10	100	247-11 KTS
2300	20-30N	160-08W	"		20	1013	80	75	79	3	1	120-5-5	81	10	100	247-11 KTS
2400	20-25N	160-21W	"		20	1013	80	75	79	3	1	120-5-5	81	10	100	247-11 KTS

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE Tues. 8 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14-06 N	169-17 W	Ptly Cldy	15	1012	81	73	79	4	1	090-5-4	82	12	080	222 10.5 kn
0200	14-00 N	169-22 W	" "	15	1011	81	73	79	4	1	090-5-4	82	12	080	222 10.5 kn
0300	13-53 N	169-30 W	" "	15	1011	81	73	79	1	0	090-5-4	82	10	080	222 10 kn
0400	13-45 N	169-37 W	" "	15	1011	81	73	79	1	0	090-5-4	82	10	080	222 10 kn
0500	13-37 N	169-45 W	" "	5	1011	82	77	84	1	0	090-5-4	82	12	357	222 10 kn
0600	13-24 N	169-52 W	" "	20	1011	82	77	84	1	0	090-5-4	82	12	357	222 10 kn
0700	13-25 N	170-00 W	" "	20	1012	82	74	84	1	0	090-5-4	82	12	090	222 10 kn
0800	13-17 N	170-06 W	" "	20	1012	82	74	74	1	0	090-5-4	72	12	090	222 10 kn
0900	13-22 N	170-06 W	" "	20	1013	82	74	74	2	2	090-5-4	82	10	090	222 - 10 KTS
1000	13-07 N	170-16 W	Cloudy	20	1013	83	76	69	2	1	090-5-4	82	10	090	222 10 kn
1100	12-59 N	170-19 W	" "	15	1013	85	76	69	2	1	090-5-4	82	10	090	222 10 kn
1200	12-51 N	170-27 W	partly	10	1013	78	77	76	10	10	090-5-4	82	15	090	222 10 kn
1300	12-38 N	170-41 W	" "	10	1012	82	75	80	5	3	090-5-4	82	10	080	222 10.5 kn
1400	12-31 N	170-48 W	Ptly Cldy	15	1012	82	75	80	5	3	090-5-4	82	8	080	222 10.5
1500	12-23 N	170-55 W	" "	20	1011	82	75	80	3	1	135-7-4	82	7	080	222 10.5
1600	12-16 N	171-02 W	" "	20	1011	82	75	80	3	1	135-7-4	83	8	080	222 10.5
1700	12-09 N	171-10 W	" "	20	1011	82	77	84	6	1	135-7-4	83	8	080	222 10.5
1800	12-03 N	171-18 W	" "	20	1011	84	76	76	6	1	080-2-4	83	10	080	314 10.5
1900	12-13 N	171-25 W	" "	15	1011	82	77	84	5	1	080-2-4	83	10	080	314 10.5
2000	12-21 N	171-33 W	" "	7	1012	81	77	79	3	2	080-5-4	83	10	070	314 11
2100	12-30 N	171-43 W	FW Cldy	15	1012	81	77	79	3	2	080-5-4	83	10	070	314 11
2200	12-38 N	171-51 W	" "	15	1012	81	77	79	3	2	080-5-4	83	10	070	314 11
2300	12-46 N	171-46 W	" "	15	1012	81	77	79	3	2	080-5-4	83	10	070	048 10
2400	12-52 N	171-39 W	" "	15	1012	81	77	79	3	2	080-5-4	83	10	070	048 10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE Wed 9 Sept. 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	12-59 N	171-33 W	1014	Partly Cloudy	10	1014	80	76	82	3	2	080-5-5	83	7	090	048 10
0200	13-06 N	171-25 W	"	"	10	1010	80	77	81	1	2	080-5-4	83	5	080	048 10
0300	13-13 N	171-18 W	"	"	5	1009	80	77	81	3	3	090-5-4	83	5	070	048 10
0400	13-20 N	"	"	"	10	1009	80	76	83	2	1	090-5-4	83	5	070	048 10
0500	13-27 N	171-04 W	"	"	5	1010	80	76	87	2	0	090-5-4	83	13	110	048 10
0600	13-34 N	170-50 W	"	"	15	1010	80	76	87	3	0	090-5-4	83	4	150	048 10
0700	13-36 N	170-55 W	"	"	15	1010	80	76	87	3	0	090-5-4	83	4	150	048 10
0800	13-44 N	170-48 W	"	"	15	1012	82	77	84	4	0	090-5-4	83	4	150	048 10
0900	13-50 N	170-37 W	1012	Partly Cloudy	10	1012	82	77	84	8	0	090-5-4	83	10	090	048 10
1000	13-58 N	170-30 W	"	"	10	1012	84	76	76	8	0	090-5-4	83	10	090	048 10
1100	14-05 N	170-23 W	"	"	10	1012	84	76	76	8	0	090-5-4	83	10	090	048 10
1200	14-12 N	170-16 W	"	"	15	1012	84	76	76	8	0	090-5-4	83	10	090	048 10
1300	14-18 N	170-10 W	1011	Partly Cloudy	20	1011	84	76	76	5	4	090-5-4	83	15	090	048 10
1400	14-26 N	170-02 W	"	"	20	1010	84	76	76	5	3	090-5-4	83	12	090	048 10
1500	14-33 N	169-58 W	"	"	20	1010	84	76	76	5	4	090-5-4	83	12	090	048 10
1600	14-40 N	169-47 W	1010	Partly Cloudy	20	1010	84	76	76	9	4	090-5-4	83	12	090	048 10
1700	14-47 N	169-40 W	"	"	20	1010	82	77	84	8	4	090-5-4	83	12	090	048 10
1800	14-54 N	169-32 W	"	"	20	1010	82	77	84	7	4	090-5-4	83	12	090	048 10
1900	15-03 N	169-26 W	1012	Clear	20	1012	82	74	76	0	0	090-5-4	83	12	090	048 10
2000	15-10 N	169-20 W	1013	Clear	20	1013	82	74	76	0	0	090-5-4	83	12	090	048 10
2100	15-18 N	169-38 W	1013	Clear	20	1013	82	74	76	0	0	090-5-4	83	12	090	048 10
2200	15-25 N	169-46 W	1013	Clear	20	1013	82	74	76	0	0	090-5-4	83	12	090	048 10
2300	15-33 N	169-55 W	1013	Clear	20	1013	82	74	76	0	0	090-5-4	83	12	090	048 10
2400	15-36 N	170-03 W	1013	Clear	20	1013	82	74	76	0	0	090-5-4	83	12	090	048 10

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE Thurs. 10 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY T	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	15-28N	170-11W	Partly Cld	10	1012	81	74	83	2	0	092-5-6	82	15	080	222 17.5
0200	15-28N	170-18W	" "	10	1012	80	74	83	4	2	090-5-6	82	17	070	222 18.5
0300	15-12N	170-25W	" "	10	1011	80	74	83	3	1	090-5-6	82	17	080	222 18.5
0400	15-06N	170-33W	" "	10	1011	80	74	83	3	2	090-5-6	82	17	080	222 18.5
0500	14-58N	170-42W	" "	05	1010	80	77	81	4	2	090-5-6	82	18	070	223 18.5
0600	14-49N	170-52W	" "	10	1011	82	77	84	4	1	090-5-6	82	18	070	223 18.5
0700	14-48N	170-54W	" "	15	1011	82	77	84	4	1	090-5-6	82	18	070	223 18.5
0800	14-40N	171-01W	" "	15	1011	83	76	80	4	1	090-5-6	83	18	070	223 18.5
0900	14-32N	171-05W	" "	15	1012	83	76	80	6	6	090-5-6	83	20	090	225 18.5
1000	14-25N	171-12W	" "	15	1012	85	76	73	6	6	090-5-6	83	20	090	225 18.5
1100	14-15N	171-20W	" "	15	1012	85	76	73	6	6	090-5-6	83	20	090	225 18.5
1200	14-02N	171-28W	" "	15	1012	85	76	73	6	6	090-5-6	83	20	090	230 18.5
1300	14-03N	171-38W	" "	15	1011	85	76	73	6	5	090-5-6	82	20	090	230 18.5
1400	13-56N	171-41W	" "	15	1010	85	76	73	6	5	090-5-6	82	20	090	225 18.5
1500	13-48N	171-56W	" "	15	1010	85	76	73	6	5	090-6-8	82	20	080	225 18.5
1600	13-41N	172-03W	" "	15	1009	85	76	75	6	5	090-6-8	82	20	080	225 18.5
1700	13-33N	172-11W	" "	15	1009	84	76	76	6	4	090-6-8	82	18	080	225 18.5
1800	13-25N	172-19W	" "	15	1009	84	76	76	6	4	090-6-8	82	18	080	252 18.5
1900	13-18N	172-27W	" "	15	1009	82	77	84	6	4	090-6-8	82	18	080	315 18.5
2000	13-21N	172-35W	" "	15	1009	82	77	84	6	4	090-6-8	82	18	080	315 18.5
2100	13-32N	172-42W	Clear	15	1010	82	77	77	0	0	070-6-8	82	22	070	315 11K
2200	13-40N	172-51W	Clear	20	1012	82	77	74	0	0	070-6-8	82	22	070	315 11K
2300	13-47N	172-59W	Clear	20	1012	82	77	74	0	0	070-6-8	82	22	070	315 11K
2400	13-56N	173-01W	Clear	20	1012	82	77	74	0	0	070-6-8	82	22	070	315 11K

REMARKS:

\* w/squalls

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
 12-5-63



DATE 11 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14-04 N	172-53 W	Pls Cls	10	1012	82	77	84	4	2	090-6-8	82	17	080	048 9.5 kn
0200	14-10 N	172-47 W	" "	10	1011	82	77	84	2	0	090-6-8	82	17	080	048 9 kn
0300	14-16 N	172-40 W	" "	10	1011	82	77	84	2	0	090-6-8	82	17	080	048 9 kn
0400	14-23 N	172-34 W	" "	10	1011	82	77	84	3	0	090-6-8	82	17	080	048 9 kn
0500	14-29 N	172-27 W	" "	5	1011	82	74	76	3	0	090-6-8	82	18	080	048 9
0600	14-34 N	172-19 W	" "	8	1011	82	71	84	3	2	090-6-8	82	18	080	048 9 km
0700	14-35 N	172-12 W	" "	10	1012	82	77	84	4	2	090-6-8	82	18	080	048 9 km
0800	14-42 N	172-11 W	" "	15	1012	82	77	84	4	2	090-6-8	82	18	080	045 9 km
0900	14-45 N	172-06 W	" "	15	1013	84	76	76	5	4	080-6-8	82	25	080	045 9 km
1000	14-52 N	171-57 W	" "	15	1014	84	76	76	5	4	080-6-8	82	25	080	045 9 km
1100	14-59 N	171-50 W	" "	15	1014	84	76	76	4	4	080-6-8	82	20	080	045 9 km
1200	15-05 N	171-43 W	" "	15	1014	84	76	76	4	4	080-6-8	82	20	080	045 9 km
1300	15-11 N	171-39 W	" "	15	1012	82	77	84	6	2	080-6-8	82	20	080	045 8.5
1400	15-17 N	171-33 W	" "	15	1011	82	77	84	8	1	080-6-8	82	20	070	045 8.5
1500	15-23 N	171-27 W	" "	15	1011	82	77	84	6	1	080-6-8	82	20	070	045 8.5
1600	15-30 N	171-21 W	" "	15	1011	82	77	84	6	1	080-6-8	82	20	080	045 8.7
1700	15-31 N	171-15 W	" "	15	1011	82	77	84	6	1	080-6-8	82	17	120	045 8.7
1800	15-43 N	171-09 W	" "	10	1011	82	77	84	6	1	080-6-8	82	17	120	045 8.7
1900	15-50 N	171-02 W	" "	8	1011	82	77	84	6	1	080-6-8	82	17	120	045 9.1
2000	15-56 N	170-55 W	" "	7	1011	82	77	84	6	1	080-6-8	82	17	120	045 9.1 km
2100	16-02 N	170-53 W	FEW Cls	15	1012	82	77	84	4	3	080-6-8	82	15	080	045 8.6
2200	16-09 N	170-47 W	" "	15	1014	82	77	84	4	3	080-6-8	82	15	080	045 8.6
2300	16-15 N	170-40 W	" "	15	1014	82	77	84	4	3	080-6-8	82	15	080	045 8.6
2400	16-23 N	170-49 W	" "	15	1014	82	77	84	4	3	080-6-8	82	15	090	045 10.0 km

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

 SI-MNH-955  
 12-5-63



DATE 12 Sept. 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY T	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16-30 N	170-57 W	101.0	15	101.0	80	74	83	3	1	080-6-8	82	13	080	314	11 km
0200	16-36 N	171-05 W	101.2	15	101.2	81	73	83	3	1	080-6-8	82	13	080	314	11 km
0300	16-43 N	171-12 W	101.2	15	101.2	81	74	83	3	1	080-6-8	82	16	080	314	11 km
0400	16-35 N	171-28 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	11 km
0500	16-38 N	171-51 W	101.4	8	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
0600	16-18 N	171-45 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
0700	16-10 N	171-52 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
0800	16-13 N	171-55 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
0900	16-06 N	172-03 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
1000	15-59 N	172-11 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
1100	15-51 N	172-20 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
1200	15-48 N	172-22 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
1300	15-48 N	172-22 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
1400	15-48 N	172-22 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
1500	15-38 N	172-38 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
1600	15-26 N	172-45 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
1700	15-19 N	172-54 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
1800	15-11 N	173-01 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
1900	15-04 N	173-09 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
2000	14-56 N	173-17 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
2100	14-48 N	173-26 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
2200	14-40 N	173-33 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
2300	14-33 N	173-40 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km
2400	14-40 N	173-49 W	101.4	15	101.4	82	77	84	4	2	080-6-8	82	16	080	314	10.5 km

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

 SI-MNH-955  
 12-5-63



DATE 13 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY T	DEW PT	HUMID	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14-48N	173-55W	Partly Cloudy	15	1013	82	74	83	2	1	090-6-8	82	17	280	314 10.5kts
0200	14-55N	174-03W	" "	15	1012	82	75	80	1	0	090-6-8	82	17	280	314 10.5kts
0300	15-02N	174-09W	" "	15	1012	82	75	80	1	0	090-6-8	82	17	280	314 10.5kts
0400	15-10N	174-10W	" "	15	1012	82	75	80	2	0	090-6-8	82	17	280	314 10.5kts
0500	15-17N	174-03	" "	8	1012	82	74	76	2	0	090-6-8	82	17	080	048 10kts
0600	15-27N	173-59W	" "	8	1012	82	74	76	2	0	090-6-8	82	16	080	048 10kts
0700	15-34N	173-52W	" "	10	1012	82	74	76	2	0	090-6-7	82	15	080	048 10kts
0800	15-25N	173-47W	" "	15	1012	82	74	76	2	0	090-6-7	82	15	080	048 10kts
0900	15-40N	173-33W	" "	15	1013	83	74	80	2	2	090-6-7	82	15	080	045 9.5kts
1000	15-46N	173-26W	" "	15	1014	83	74	80	2	2	090-6-7	82	15	080	045 9.5kts
1100	15-53N	173-20W	" "	15	1014	83	74	80	3	2	090-6-7	82	15	080	045 9.5kts
1200	16-00N	173-13W	" "	15	1014	83	74	80	5	2	090-6-7	82	15	080	045 9.5kts
1300	16-05N	173-09W	" "	15	1015	84	74	73	8	5	090-6-7	82	13	080	045 9.5kts
1400	16-11N	173-02W	" "	15	1013	83	74	76	4	1	090-6-7	82	13	080	045 9.5kts
1500	16-18N	172-55W	" "	15	1012	83	74	76	5	2	090-6-7	82	13	080	045 9.5kts
1600	16-25N	172-49W	" "	15	1012	83	74	76	4	2	090-6-7	82	13	080	045 9.5kts
1700	16-26N	172-48W	" "	15	1013	83	76	80	4	3	090-6-7	82	13	080	045 9.5kts
1800	16-33N	172-41W	" "	10	1013	82	77	84	7	4	090-6-7	82	13	080	045 9.5kts
1900	16-40N	172-34W	" "	5	1014	82	77	84	8	4	090-6-7	82	15	080	045 9.5kts
2000	16-47N	172-27W	" "	5	1014	82	77	84	8	4	090-6-7	82	15	080	045 9.5kts
2100	16-53N	172-26W	Cloudy	10	1015	82	77	84	10	10	090-6-8	82	15	080	045 9kts
2200	17-00N	172-19W	Cloudy	10	1015	82	77	84	10	10	090-6-8	82	15	080	045 9kts
2300	17-06N	172-12W	Cloudy	10	1015	82	77	84	10	10	090-6-8	82	17	080	045 9kts
2400	17-12N	172-06W	Cloudy	10	1015	82	77	84	10	10	090-6-8	82	17	080	045 9kts

REMARKS:

XRAY

ALL TIMES LOCAL (WHISTON); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE 14 Sept. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17-16N	172-04W	Cloudy rain	10	1014	82	72	78	9	9	090-6-8	82	15	100	045 9 km
0200	17-22N	171-58W	" "	12	1014	80	73	78	9	8	090-6-8	82	15	090	003 10 km
0300	17-31N	171-58W	" "	12	1014	82	73	79	8	7	090-6-8	82	15	090	003 10 km
0400	17-41N	171-52W	" "	12	1013	81	73	77	8	7	090-6-8	82	16	090	003 10 km
0500	17-51N	171-57W	" "	8	1014	80	72	75	8	7	090-6-7	82	16	090	003 10 km
0600	18-00N	171-46W	" "	10	1014	81	74	79	8	7	090-6-8	82	16	090	003 10
0700	18-04	171-48W	" "	10	1016	81	74	79	8	7	090-6-8	82	16	090	001 10
0800	18-22N	171-48W	" "	20	1016	81	74	77	8	7	090-6-7	82	15	090	003 - 9.5
0900	18-20N	171-59W	" "	20	1016	82	74	79	8	7	090-6-7	82	15	090	003 - 9.5
1000	18-30N	171-52W	" "	20	1016	83	76	80	8	7	090-6-7	82	15	090	003 - 9.5
1100	18-39N	171-58W	" "	20	1016	83	76	80	8	7	090-6-7	82	15	090	003 - 9.5
1200	18-49N	171-58W	" "	20	1016	83	76	80	8	7	090-6-7	82	15	090	003 - 9.5
1300	19-00N	171-58W	Overcast	20	1015	82	74	76	9	7	090-6-7	82	16	100	003 10 km
1400	19-08N	171-52W	" "	20	1015	82	74	76	9	8	090-6-7	82	13	100	003 10 km
1500	19-18N	171-52W	" "	25	1015	82	74	76	9	8	090-6-7	82	13	100	003 10 km
1600	19-28N	171-52W	" "	15	1015	82	74	76	9	8	090-6-7	82	13	100	003 10 km
1700	19-39N	171-57W	Cloudy	15	1015	82	75	80	8	7	090-6-7	82	14	100	003 10
1800	19-49N	171-57W	" "	10	1015	82	75	80	8	7	090-6-7	82	14	100	003 10
1900	20-00N	171-56W	" "	8	1015	82	75	80	8	7	090-6-7	82	15	100	003 10
2000	20-08N	171-55W	" "	8	1015	82	75	80	8	7	090-6-7	82	15	100	003 10
2100	20-19N	171-56W	Few clouds	15	1013	81	73	75	3	2	090-6-6	82	10	090	003 10 km
2200	20-30N	171-56W	" "	15	1012	81	73	75	3	2	090-6-6	82	10	090	003 10 km
2300	20-40N	171-55W	" "	15	1016	81	73	75	3	2	090-6-6	82	10	090	003 10 km
2400	20-51N	171-55W	" "	15	1016	81	73	75	3	2	090-6-6	82	10	090	003 10 km

REMARKS:

ALL TIMES LOCAL (WHISKY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS



DATE 15 Sept. 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.	
0100	21° 00' N	171° 55' W	1017	Clay	15	1017	80	74	79	3	2	090-6-7	82	17	090	003	10 K
0200	21° 10' N	171° 55' W	"	"	15	1017	82	74	79	2	1	090-6-7	82	17	090	003	10 K
0300	21° 20' N	171° 55' W	"	"	15	1017	80	74	79	2	0	090-6-7	82	17	090	003	10 K
0400	21° 30' N	171° 55' W	"	"	"	1017	80	74	79	2	0	090-6-7	82	17	090	003	10 K
0500	21-40 N	171-55 W	"	"	8	1017	80	74	79	3	0	090-6-7	82	16	090	003	10 K
0600	21-50 N	171-55 W	"	"	14	1018	82	74	76	3	0	090-6-7	82	16	090	003	10 K
0700	22-00 N	171-55 W	"	"	10	1018	82	74	76	3	0	090-6-7	82	16	090	003	10 K
0800	22-10 N	171-55 W	"	"	18	1018	82	74	76	3	0	090-6-7	82	16	090	003	10 K
0900	22-18 N	171-53 W	"	"	20	1018	82	74	76	3	2	090-6-7	82	18	090	003	10 K
1000	22-28 N	171-53 W	"	"	20	1019	82	74	76	3	2	090-6-7	82	18	090	003	10 K
1100	22-37 N	171-52 W	"	"	20	1019	82	74	76	3	2	090-6-7	82	18	090	001	10 K
1200	22-47 N	171-52 W	"	"	20	1019	82	74	76	3	2	090-6-7	82	18	090	001	10 K
1300	22-52 N	171-52 W	"	"	20	1018	82	74	76	8	2	090-6-7	82	18	090	001	10 K
1400	23-03 N	171-52 W	"	"	20	1018	80	73	79	7	5	090-6-7	82	15	090	001	10 K
1500	23-12 N	171-52 W	"	"	20	1018	80	73	79	8	7	090-6-7	82	15	090	001	10 K
1600	23-22 N	171-52 W	"	"	20	1018	80	73	79	8	6	090-6-7	82	15	090	001	10 K
1700	23-33 N	171-51 W	"	"	20	1018	80	74	83	8	4	090-6-7	81	16	090	001	10 K
1800	23-43 N	171-50 W	"	"	10	1018	80	74	73	9	7	090-6-7	81	16	090	001	10 K
1900	23-53 N	171-50 W	"	"	8	1019	80	73	79	9	7	090-6-7	81	16	090	001	10 K
2000	24-03 N	171-51 W	"	"	8	1019	82	73	79	9	7	090-6-7	81	16	090	001	10 K
2100	24-10 N	171-51 W	Clay	"	15	1019	80	73	79	8	7	090-6-7	81	15	090	001	10 K
2200	24-20 N	171-51 W	"	"	13	1020	80	73	79	8	7	090-6-7	81	15	090	001	10 K
2300	24-30 N	171-50 W	"	"	15	1020	80	73	79	8	7	090-6-7	81	15	090	001	10 K
2400	24-40 N	171-50 W	"	"	15	1020	80	73	79	8	7	090-6-7	81	15	090	001	10 K

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
 12-5-63



DATE 16 Sept 1954

NO OBSERVATIONS MADE THIS DAY - NO FI.

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	24-50N	171-50W	Cloudy 4/12	12	1020	80	73	77	8	7	090-6-7	80	17	090	001 10k
0200	25-00N	171-50W	" "	7	1020	78	72	83	9	8	090-6-7	80	17	090	001 10k
0300	25-10N	171-50W	" "	12	1020	75	72	83	9	8	090-6-7	80	17	110	001 10k
0400	25-20N	171-49W	Cloudy	12	1020	78	72	83	9	8	090-6-7	80	17	140	000 10k
0500	25-30N	171-49W	"	8	10										
0600	25-40N	171-50W	"	10											
0700			ANCHORED												
0800															
0900															
1000															
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															
REMARKS:															

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63